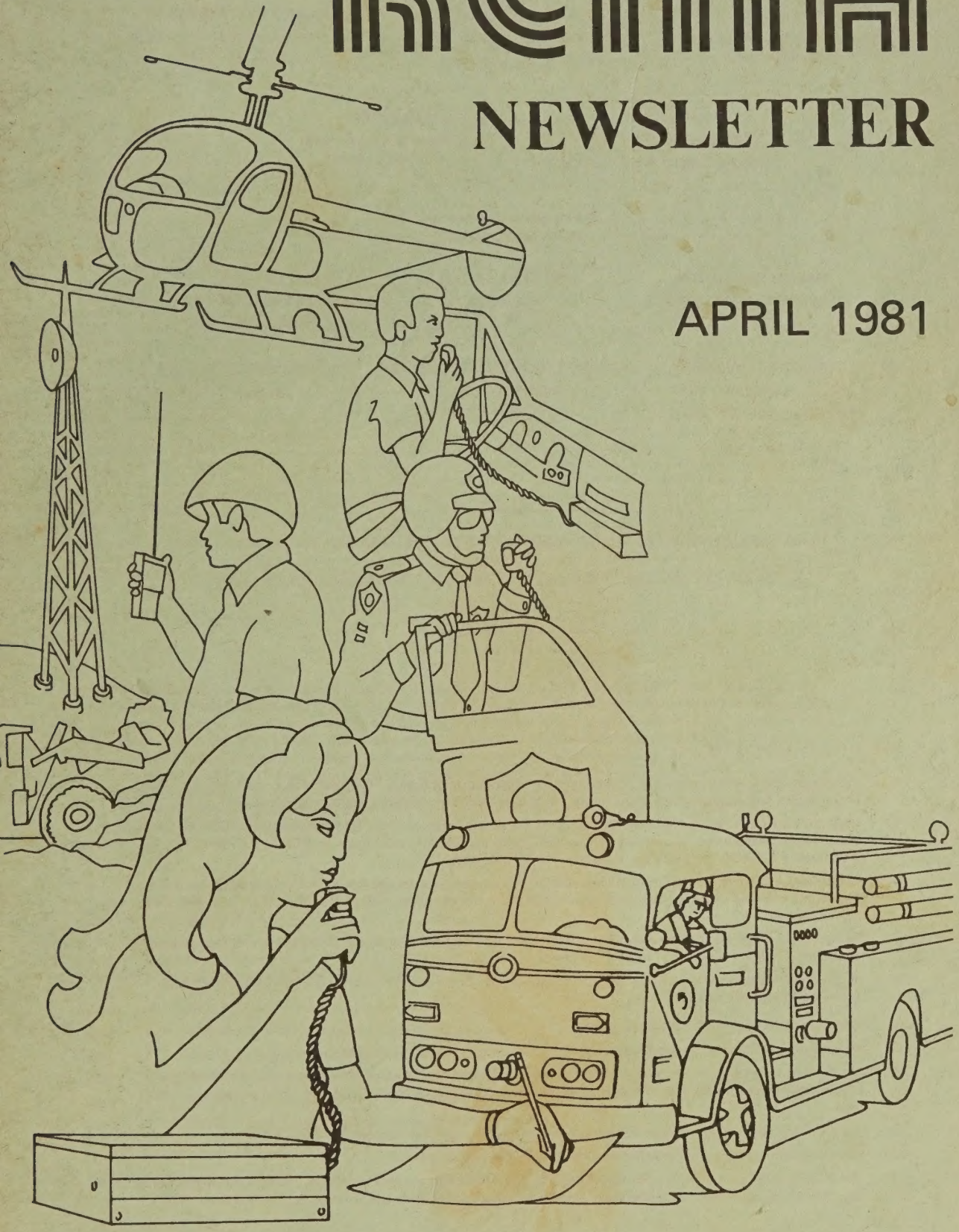
RCMA

NEWSLETTER

APRIL 1981



FIRST NATIONAL AND INTERNATIONAL ORGANIZATION
OF MONITOR RADIO LISTENERS

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RCMA NEWSLETTER

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FOR YOUR INFORMATION:

1. All club business, unless otherwise noted, must be addressed to R.C.M.A., P.O. Box 4563, Anaheim, CA 92803. This includes matters that relate to renewals, changes of address, newsletter delivery problems, etc.
2. Input to the RCMA Newsletter must be mailed to the proper editors, whose addresses are included in the individual column headlines. If no particular column seems appropriate, send input to RCMA, P.O. Box 216, Willow Grove, PA 19090 and mark the envelope 'For Newsletter.'
3. To forward a letter to a specific RCMA member whose address you do not know, put your message to that person in a stamped envelope with your return address in the envelope; mail to R.C.M.A., P.O. Box 408, Earp, CA 92242.
4. Please include your RCMA membership number with all correspondence to newsletter editors or club headquarters.
5. If you require a reply when writing to RCMA headquarters or one of the editors, you MUST enclose a self-addressed, stamped envelope.
6. Please write on only one side of the paper.
7. Please don't combine in one letter several items that should go to different addresses.
8. If you want to type what you submit to the newsletter, please don't exceed a seven-inch column width and please single space. Doing this may save an editor from having to retype the material. Please don't use script type.
9. Your RCMA membership number and expiration date appear on your newsletter mailing label.
10. You may join or renew your membership for ONLY one year at a time.
11. The RCMA Newsletter accepts paid advertising. If you would like to place a paid ad, please write to the following address for our advertising guidelines: RCMA Newsletter, P.O. Box 4563, Anaheim, CA 93803.

RCMA NEWSLETTER

April 1981 Issue 62
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The RCMA Newsletter is published monthly by members of the RADIO COMMUNICATIONS MONITORING ASSOCIATION, P.O. Box 4563, Anaheim, CA 92803. Subscription rate/membership fee is $12.00 for U.S. residents. For persons in other countries, the following rates apply: Canada and Mexico–$13.50; Europe–$14.50, South Pacific and Asia–$15.00. These dues are payable in U.S. funds and are subject to change. Information contained herein is obtained primarily from members and does not necessarily present the position or reflect the opinion of RCMA as a whole. The RCMA Newsletter editors and officers are not responsible for the accuracy or validity of information contained herein. RCMA does not necessarily recommend or endorse products or services advertised herein. The publication is copyrighted ©. Reproduction of any material in this newsletter is prohibited without prior written consent.

NEWSLETTER DEADLINES:

* * * please note that the newsletter deadlines refer to the month the newsletter is to be mailed, not to the date on the cover. Information submitted by November 9, for example, will be mailed to members in December. The December mailing carries a January cover date to assist USPS in their speedy delivery.

March	9	MONDAY Newsletter deadline for 'April' Newsletter.
April	6	MONDAY Newsletter deadline for 'May' Newsletter
May	4	MONDAY Newsletter deadline for 'June' Newsletter
June	8	MONDAY Newsletter deadline for 'July' Newsletter
July	6	MONDAY Newsletter deadline for 'August' Newsletter
August	10	MONDAY Newsletter deadline for 'September' Newsletter

** Calendar **

Send notices of upcoming events for the Calandar section to John Clark, RCMA, P.O. Box 4563, Anaheim, CA 92803. Please send notices well in advance of the Newsletter deadline.

The R.C.M.A. supports scanning and scanner clubs. If your local R.C.M.A. scanner group is having a meeting, or if you are another radio club planning a meeting, send an announcement to the Calendar Editor and it will be sent to all members of R.C.M.A. Because of individual member requests and previous problems, the Board does not feel that sectional mailing lists should be distributed.

Greater L.A. area R.C.M.A. –

General reorganization meeting Friday, March 20, 1981, 8:00 PM at Mercury Savings and Loan, Valley View and Lincoln Avenue, Buena Park, Ca.

Midwest R.C.M.A.

Meeting change of date from 7 June to 17 June, 1981. For information as to location, contact:

Edward Robert Sirovy I1–004
311 S. Williams Street (Please include a SASE for return mail)
Westmont, Illinois 60559

Board meetings are open to all members of R.C.M.A. They start at 7:30 PM. Now that we have separated labeling of the newsletter, the meetings will be devoted to R.C.M.A. policy and, of course, the latest scanner activities.

April 7	TUESDAY	Board Meeting at Anaheim Branch Library. 1349 S. Euclid.
May 5	TUESDAY	Board Meeting at Anaheim Branch Library, 1349 S. Euclid.
June 9	TUESDAY	Board Meeting at Anaheim Branch Library, 1349 S. Euclid.

NEED BACK ISSUES?

Back issues are again available for sale to members in the lots indicated below. Please note that the RCMA Newsletter is a club newsletter. Because it reflects the growth of RCMA, early issues do not contain as many articles as do the current ones. The Newsletter has evolved from a few mimeo pages to its present format under the leadership of three great editors---Don Jones, Iden Rogers, and Chuck Gysi---and the contributions of club members.

The reproduction of the articles is quite readable. To cut costs and allow the possibility of binding all the reprints in a notebook, the format of later newsletters has been changed from saddle stitch to edge binding. This has changed the page order presentation, but not the content of the articles or the frequency lists.

To order: Using the information given below, send your requests to R.C.M.A., Bill Ell, Secretary, 2831 Hermanos St., Pasadena, CA 91107. Be sure to include your name, address, RCMA membership number (it is on your label), and your check or money order payable to R.C.M.A.

PRICES VALID UNTIL JANUARY 1982

Lots (Months/Year)	No. of Issues	Price
Sept 75 - June/July 76 (No Oct or Nov published)	7	$ 2.00
Aug - Dec 76 (No Oct published)	4	$ 3.00
Jan - June 77	6	$ 4.00
July - Dec 77	6	$ 4.00
Jan - June 78	6	$ 5.00
July - Dec 78	6	$ 5.00
Jan - June 79	6	$ 6.00
July - Dec 79	6	$ 6.00

Reports of Meetings and Officers

Send reports (informal accounts) of RCMA meetings, gatherings, etc. which have occured to: John Clark, RCMA, P.O. Box 4563, Anaheim, CA 92803.

Please note the change in the dues structure which were mentioned in the January and Frebruary newsletters. To reinterate the dues are

The 50 United States	$12.00	
Canada & Mexico	$13.50	These additional
Europe	$14.00	fees reflect part
South Pacific & Asia	$15.00	of the additional
These prices are valid until 1 July 81		cost of mailing.

Note also the date on the top line of your newsletter label. That is the month your newsletter subscription will terminate. For the new members who enrolled using the rate structures found in other publications which are several months old, your substriptions have been prorated.

The last three issues have been mailed under a new procedure. The mailing date has been shifted to about five days after the Board Meetings. We use to be three to four weeks inadvance of the cover date of the newsletter. Now in worst case conditions we will be two weeks ahead of the date. You should receive your newsletter no later that the first week of the month on the cover.

We have to apologize for some of the delays in getting new applicants on our mailing roster and the new members list in the newsletter. The only excuse we can offer is we are swamped. (the week the president keypunched 123 new membership cards, he also graded the same exact number of final exams.) If any one out there would like to volunteer assistance, do not hold back because you think there will be no work. We have plenty.

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If the individual who sent a scanner to be repaired and used the name of R.C.M.A. to impress the repairman, will come forward with proper identification and the cash to pay the COD they may retrive their unit.

It should be noted that no one without Board approval is authorized to use the name of the R.C.M.A. in any commercial connection. Unless the individual who did so in the instance above has a valid explanation the Board will terminate their membership in the R.C.M.A.

THOUGHT waves

Chuck Gysi, Managing Editor, P.O. Box 216, Willow Grove, PA 19090

Whoever said ham radio operators don't get along with other radio hobbyists?

Although there always seems to be a conflict between the amateurs and CBers, the following may be the first example of hams getting along with us monitor hobbyists.

Three cheers go out to the WA6PPS repeater group in the Los Angeles area for their recent cooperation with scanner users in the Southland.

Apparently owners of Bearcat units with a 10.8 MHz IF in Southern California have been plagued by intermod received by the WA6PPS repeater on 147.900 and mountaintop paging operations on 158.700 MHz.

The two frequencies, when both are transmitting, locked up all high band channels on a scanner with 10.8 IF (since the two channels are 10.8 MHz apart) and the listener could hear both transmissions at the same time with all the annoying tones, etc. Sometimes the activity of the two transmitters could lock up one's high band channels for several hours at a time.

Bearcat tried solving the problem by converting units to a 10.85 MHz intermediate frequency. However, this was time consuming and could cause birdies on other desired frequencies such as the San Fernando Valley California Highway Patrol frequency of 42.50 MHz.

Because there were so many scanner owners and the wide area that experienced the problem, the WA6PPS repeater group changed their frequency. Those that had the problem may not have realized it has diminished, however, for those that were aware of it, the situation apparently is greatly improved.

The repeater group's actions are not only a big boon to monitor hobbyists, but reflects the goodwill of amateur radio operators as well.

Bearcat has introduced two new models of scanners that should be available soon.

The Bearcat 150, listed at under $250, has only 10 channels instead of 16 channels, and has many features found on the BC 160. The purpose of the BC 150 will be to offer a budget scanner.

The Bearcat 350 will be Electra Co.'s top-of-the-line monitor receiver. The BC 350 can display with words the source of the transmissions received in addition to numeric readout. It has 50-channel capability and a completely separate readout for channel and feature in use. Made for the elite, suggested list price is $600.

Why doesn't that editor print what I sent him?

That's one of the most frequent questions members ask me by mail, phone and in person. Editors on this newsletter write their columns usually two to three months before they arrive in the newsletter you receive. When you send in information, the editor must decide what is the most important information to print in his column. Some editors receive so much input, that it may very well be impossible to print everything right after they receive it. I, myself, never throw out any contributions when I receive them. In fact, it's very possible that I may use an untimely contribution up to a year after it was received.

So keep in mind that we hand-working, unpaid volunteer editors do the best we can. Give us the credit we deserve.

Are you looking for converters for your scanner? Chances are Hamtronics Inc. has the one you are looking for.

They carry converters for most amateur radio bands and government bands, including 72-76 and 806-894 MHz. For more information, request their catalog from Hamtronics Inc., 65 Moul Road, Hilton, NY 14468.

It's hard to imagine we have more than 3,000 members and no volunteers!

There are several current openings on the newsletter staff that must be filled immediately. We need a new Satellites column editor who is well-versed in satellite monitoring. We need an editor who is knowledgeable in monitoring law to edit the Monitoring and the Law column. Also, we need an advertising manager for the newsletter to accept advertising, keep a ledger book and recruit new ad accounts for the club. And last, but no least, an assistant editor is needed for the newsletter to assist the managing editor with various columns and input. If you can type and are interested in any of the positions, contact me by mail immediately at the Willow Grove address.

YOUR THOUGHTS

P.O. Box 216, Willow Grove, PA 19090

To the editor:

First, I would like to wish you all over there a very happy New Year 1981. I hope it will be a good year for you and RCMA.

I also thank you for the fantastic work you put into RCMA. 1980 was the first year I joined RCMA as a member. I am very impressed, and maybe a little surprised, about the organization and how well everything works. Good luck also in the future.

I am sorry that you have not heard from me in 1980, but it has been a little bit too much work and too little of holidays. I hope I can help you with more information from the northern countries in Europe this year.

I appreciate also very much the distribution of the excellent newsletter. I have it in my hand four to five days after you mail it at the post office in Pasadena. Not bad at all!

Thanks again. You're all doing a pretty good job.

Lars Estvall (SWED-001)
Moheda, Sweden

To the editor:

I just wanted to add my two cents worth about SCAN. I think it is (in Ira Sheinman's words) also a ripoff compared to RCMA.

I have been a member of RCMA for more than six years. During that time, RCMA has not missed sending me an issue. I have been a member of SCAN for two years and they have missed two issues. They only have a little 16-page newsletter and it only comes out four times a year. They say SCAN has 20,000 members; I would like to know how long they are going to keep them. The members I have been talking to in St. Louis said they are not going to re-join SCAN.

I think RCMA is the better of the two clubs.

Charles L. Epps (MO-017)
St. Louis, Missouri

To the editor:

You folks really put together a fine publication and I look forward to receiving it every month.

Randy Zintbaum (NC-011)
North Carolina

To the editor:

Enclosed is my renewal check for 1981. Keep up the good work. The newsletter is great. I particularly like the military, aero and shortwave utility info.

John Gundersen (MN-014)
St. Paul, Minnesota

To the editor:

Please renew my membership in RCMA. I find it the best newsletter and the best monitoring club in the country. Keep up the good work.

William Mulhall (NJ-034)
Linden, New Jersey

To the editor:

Just a few words to let all you folks know how much I enjoy the newsletter. It seems to get fatter every month and crammed with info that makes a monitor "freak" raise his eyebrows. Keep up the good work.

Jim Nied (IL-082)
Union, Illinois

To the editor:

It seems Motorola's DVP (Digital Voice Protection) has struck my favorite government monitoring channels. "Uncle" must have thought the system's privacy was worth all our money.

For the interests of all, I want to mention when you think an agency has vanished or changed frequencies, what you may or may not be hearing is DVP. What do you listen for?

I had heard this very annoying interference (I thought!) for months. I sadly learned what I was hearing.

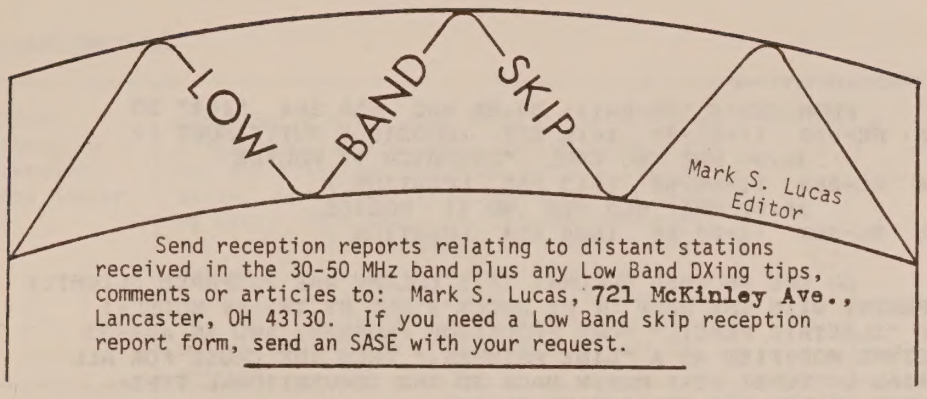
DVP sounds like ordinary squelch noise, but more annoying, when it breaks your scanner's squelch threshhold. At the end of transmissions (noise), a very slight tone is heard.

A single-inversion unscrambler has no effect.

I would like any information on how it works, other U.S. users, possible unscrambling, etc. Even anonymous information would be appreciated.

Michael Hodges (VA-002)
Route 2, Box 146
Rocky Mount, Virginia 24151

(Editor's note: I know the feeling. A high-security state agency in Pennsylvania just switched to DVP in the Philadelphia area!)



Send reception reports relating to distant stations received in the 30-50 MHz band plus any Low Band DXing tips, comments or articles to: Mark S. Lucas, 721 McKinley Ave., Lancaster, OH 43130. If you need a Low Band skip reception report form, send an SASE with your request.

SEEMS THAT F-2 HAS ALL BUT GONE! THE MORE REASON TO SEND ALL THOSE BACK LOGS FROM 1980 IN RIGHT AWAY.

FROM GARY (IL-073): 33.04 MHZ KRJ 643 "BUS-1" SCHOOLBUS
BASE BC-250 12-08-80 1020 CST LOMPOC,CA. 1679 MILES
33.48 MHZ KGE 450 "KGE 450" FIRE
BASE BC-250 11-16-80 2400 CST ALLENTOWN,PA. 740 MILES
33.66 MHZ KCF 313 "ANDOVER 3" FIRE
BASE BC-250 11-17-80 0014 CST ANDOVER,MASS. 957 MILES
33.66 MHZ KPC 48 "SOLANO CO" FIRE
BASE BC-250 11-19-80 1105 CST FAIRFIELD,CA. 1688 MILES
33.66 MHZ KOT 63 "FORESTRY SANGOR" FIRE
BASE BC-250 11-19-80 1592 CST SANGER,CA. 1592 MILES
33.82 MHZ KCB 404 "KCB 404" FIRE
BASE BC-250 11-17-80 0009 CST ASHBURNHAM,MASS. 883 MILES
33.86 MHZ NO CALL "BRADFORD CO" FIRE
BASE BC-250 11-16-80 2340 CST BRADFORD CO, PA. 679 MILES
33.98 MHZ WCA 984 "REGION 4" FIRE
BASE BC-250 10-24-80 1121 CST SACRAMENTO,CA. 1653 MILES
39.92 MHZ KMA 376 "KMA 376" POLICE
BASE BC-250 11-27-80 SANTA CLARA CO, CA. 1696 MILES

FROM BOB (NY-144): 37.20 MHZ NO CALL SPANISH SERVICE?
BASE REGENCY K500 10-10-80 1200 CST LOCATION?
39.86 MHZ NO CALL SPANISH SERVICE?
BASE REGENCY K500 10-18-80 HELP HERE TOO!
39.88 MHZ KXZ 67 NO ID POLICE
BASE REGENCY K500 10-24-80 LOUIS & CLARK CO, MONTANA
39.82 MHZ KMA 628 "LASO" SHERIFF
BASE REGENCY K500 12-31-80 LA CO,CA. 3000 MILES(?)
39.94 MHZ KMA 628 NO ID SHERIFF
BASE REGENCY K500 12-31-80 LA CO,CA. 3000 MILES
42.06 MHZ NO CALL "RANDALL CO" SHERIFF?
BASE REGENCY K500 01-02-81 LOCATION?

FROM NY-117: 39.88 MHZ NO CALL OR ID SHERIFF
BASE REGENCY TOUCH 1-8-81 1530 EST LA CO,CA 2100 MILES
39.02 MHZ NO CALL OR ID SHERIFF
BASE REGENCY TOUCH 1-8-81 1533 EST LA CO,CA 2100 MILES
39.64 MHZ NO CALL "LAKEWOOD" SHERIFF
BASE REGENCY TOUCH 1-8-81 1557 EST LA CO,CA 2100 MILES
(EDITOR NOTES: SORRY I FORGOT YOUR NAME, NY-117!
ALSO, PLEASE KEEP YOUR LOGS CURRENT TO ONE CALENDAR YEAR!
IT'S BEST TO KEEP THINGS AS CURRENT AS POSSIBLE TO MAINTAIN
MEMBER READERSHIP.)

LOW BAND SKIP CONTINUED

FROM EDDIE (NY-041): 39.82 MHZ KEA 284 "182" SO
BASE BC-250 11-20-80 1612 EST (POSSIBLE BUTTE,MONT ?)
39.96 MHZ NO CALL "DISPATCH 1" POLICE
BASE BC-250 11-20-80 1613 EST LOCATION ?
39.92 MHZ KLG 622 NO ID POLICE
BASE BC-250 11-20-80 1620 EST LOCATION ?

SO END ANOTHER COLUMN. THIS COLUMN WAS PREPARED SLIGHTLY DIFFERENT WITH THE HELP OF MY UNCLE'S AND MY TRS-80 MODEL-I WITH "ELECTRIC PENCIL" WORD PROCESSOR PROGRAM, AND AN ASR-33 TELETYPE MODIFIED AS A "LINE PRINTER." THUS THE CAUSE FOR ALL CAPITAL LETTERS! NEXT MONTH BACK TO THE CONVENTIONAL TYPEWRITTER METHOD AND CORRECTION FLUID!

Miscellany

P.O. Box 216
Willow Grove, PA 19090

UPDATE ON HOW TO ORDER FCC MICROFICHE

The following information has been forwarded to me by the U.S. Department of Commerce National Technical Information Service. It details FCC microfiche files that are available for purchase and what is included in each file. There are many files that are available through NTIS, however, I have listed below only those files that are of interest to monitor hobbyists. If you are interested in other files, write to NTIS at 5285 Port Royal Road, Springfield, VA 22161. If you are interested in marine, mobile phone or aviation, they have the fiche files. Below are listed ordering numbers and costs for each file. Payment may be made by chebk, money order, American Express, Visa or MasterCard to the above address. Computer tapes with file information also are available, but more costly. Write them for more info. For further information on microfiche files, you can call Harvey Poe at NTIS at (703) 487-4713. The following files are updated every three months.

ORDERING NUMBER TITLE	DESCRIPTION	SHEETS	PRICE*
PB81-902301 Licensee Name Index to Non-Government Master Frequency File	Contains the names of all licensees in the Non-Government Master Frequency File. Given a name, one can find its frequency or service and callsign for use in finding detailed information about the station in the Frequency Master File (Frequency Sequence or Service Group Code Sequence). For each name, frequency, callsign, service, authorization, state and transmitter location are given.	19	$ 10.00
PB81-902501 Callsign Index to Non-Government Frequency Master File	Contains all callsigns in the Non-Government Master Frequency File. Given a callsign, one can find its frequency or service for use in finding detailed information about the station in the Frequency Master File (Frequency Sequence or Service Group Code Sequence). For each call sign, the frequency, service, licensee name, type of authorization, transmitter location and transmitter state are given.	23	$ 11.50

MISCELLANY CONTINUED

PB81-902401 State Index to Non-Government Frequency Master File	Contains by state, the transmitter location, frequency, service, callsign, licensee name and authorization for each station in that state. Within states, information is sorted by city. This index facilitates searching for information in either of the Frequency Master File fiche when one is interested in a particular state or area. At the end of the fiche, a table showing the number of unique transmitter locations per state is printed.	24	$ 12.00
NTISUB/E/193 Frequency Master File (Frequency Sequence)	Contains the same data from the non-government frequency assignments as the report by Service group (NTISUB/E/194). This listing is in Frequency sequence. It includes the following files: Aviation, Broadcast, Auxiliary Land Transportation, Public Safety, Experimental, Misc. Also includes geographical information from the Tower File.	323	$ 161.50
NTISUB/E/194 Frequency Master File (Service Group Code Sequence)	Contains the non-government frequency assignments. Included is data such as class, frequency, call sign, power, mobile units, etc. This report is listed in Service group and Call Sign sequence. The report is produced approximately every three months. Information is more compact than in Frequency Sequence File. Does not include Tower File information.	208	$ 104.00

* North American price is $0.50 per sheet, minimum $10.00;

Skip, Satellite or Imagination?

From Robert (MD-029): In my personal communications log is an entry for June 30, 1974 which says, "Hit the Jackpot." The time is simply listed as "AM" which means "all morning." I was using a Realistic Pro 3 (tunable) set somewhere just above 44 MHz and I was located just outside of Carlisle, Pa. What I was receiving was some sort of strange repeater which was picking up all sorts of traffic on 33.90 MHz. The 33.90 was a frequency I monitored regularly and was quite familiar with what I could expect to hear — many central Penna. fire communication base stations. But now, via this strange repeater, I was picking up mobile units plus base stations in a radius of 70 miles plus skip. Fantastic! Although I did not make a notation in my log book this same strange repeater was received at other times and other places in the central Penna. area. Then on December 2, 1979 on the same Pro 3 receiver, during the mid-morning hours, located in the central area of Maryland once again I recorded in the log book that I was receiving all sorts of 33.90 MHz traffic via the "strange repeater." Only this time the reception is listed as approximately 37 MHz. I had a list of nearly 20 callsigns, from Cleveland, Ohio all the way to New England. Unbelievable!! But very puzzling as to how this was happening. On November 15, 1980 here in Maryland on a Saturday morning it happened again. But this time I was armed with a Bearcat 250 and the frequency turned out to be 36.90. But where was this strange repeater located? Why hadn't I seen something in the RCMA Newsletter? Or was it just that I had missed something while reading? Enter a friend to whom I loaned a few copies of the "Newsletter" who informs me that he saw 36.90 listed in the Satellite department. I thought for sure it would turn out to be South America! Has anyone else out there received the 33.90 transmissions via the 36.90 "repeater?" And what was the reception near 44MHz? If I was the only one to encounter this I will begin to suspect a UFO overhead!!!

Business, Etc.

Chuck Gysi, Editor

This column is for reporting frequency and radio system information for the following varied services: business, forest products, petroleum industry, special industrial, manufacturers, news media (behind-the-scenes radio, TV & newspaper), motion picture industry, security (private patrol, detective agencies, campus security & police, amusement park & stadium security, shopping center & mall security, plant/business/hotel security, etc.), General Mobile Radio Service (GMRS), mobile phone/RCC & paging, trucking firms, bus lines, taxi cabs, tow trucks, utility companies (private & municipal water, power, electric, gas, telephone, etc.), and all school & college related frequencies. Send information and questions pertaining to the radio services covered in this column to: Chuck Gysi, P.O. Box 216, Willow Grove, PA 19090.

While it still is springtime, why not send in a few contributions to your favorite columns in this newsletter before summer and vacation time comes. The summer months usually wind up quite dry for us column editors and you can help us all out now by sending in a heap of notes. Here's a few winter-type notes.

News Media/Film

SAN ANTONIO AREA NEWS MEDIA

From Larry Van Horn (TN-014):

161.700		KKYX radio
161.730	KJF 273	KCOR radio
450.050	KKU 576	KMOL-TV Ch. 4
	KKQ 985	KONO-KITY radio
450.750		KSAT-TV Ch. 12
455.050	KKW 854	KENS-TV Ch. 5 secondary dispatch, mobiles F-2
455.350	KTL 321	KCOR radio
455.450	KTL 322	KCOR radio
455.550	KXW 854	KENS-TV Ch. 5 primary dispatch F-1
455.950		KSAT-TV Ch. 12

MEMPHIS AREA NEWS MEDIA

From Larry Van Horn (TN-014):

173.225		Commercial Appeal newspaper
173.325		West Crittenden Publishing, West Memphis
450.050		WMC-TV reporters
450.0875		WMPS radio reporters (contests)
450.250	KYY 309	WMC radio Airwatch 79 traffic reports
450.350	KUY 739	WREG-TV reporters
450.6125	KEX 985	WHBQ-TV reporters cues
453.000		Press Scimitar newspaper

From GEORGE HOGGATT (CO-007): The KMGH-TV Channel 7 news helicopter has a radio on the Aurora, Colo., Fire Department's frequency. It was used to coordinate firefighting during a recent large grass fire while film crews took pictures for the news.

From CHUCK GYSI (PA-005): The ARCO Go-Patrol has moved off their 461.400 business band system onto their own General Mobile Radio Service repeater on 462.725. The control (base) callsign of the system is KAC 6261 and mobiles ID as KAC 6262. The repeater's actual callsign probably is KAC 6259, according to FCC files, and KAC 6260 might be an additional control point. Unit numbers for the traffic reporters are 100-series. As of presstime, the numbering scheme is not known, however, it appears 101 is a radio in the car of Walt MacDonald (PA-053), the traffic copter announcer; 102 appears to cover the lower end of the Schuylkill Expressway (I-76) and unit 103 seems to cover the Delaware Expressway (I-95). For some reason, unit 104 operates on the 450.850 broadcast relay repeater. This unit seems to cover South Jersey highways and the upper end of the Schuylkill Expressway and may have trouble utilizing the GMRS repeater from those locations, possibly because of power limitations of the service. Philadelphia's other traffic reporting service, Shadow Traffic Network, also utilizes GMRS on 462.550.

Business

EASTERN AND CENTRAL MASSACHUSETTS CABLE TV FIRMS

From Edward Soomre (MA-017):

35.72	Teleprompter of Worcester
43.00	Montachusett Cable TV; Fitchburg, Leominster, Gardner
151.775	Warner Cable; Athol, Salem
461.400	Continental Cable TV, Lawrence
461.575	Warner Cable, Malden
461.675	Warner Cable, Wakefield
461.825	Warner Cable, Everett
464.950	Quinebaug Valley Cable TV, Southbridge
484.0625	Greater Lowell Cable TV

EASTERN AND CENTRAL MASSACHUSETTS TWO-WAY RADIO SHOPS

From Edward Soomre (MA-017):

35.12	Fred's Radio and TV, Maynard (Motorola)
151.835	Specom Electronics, Berlin (Johnson)
461.200	Mass Comm Systems, Southboro (Johnson)
461.225	Worcester Radio, Worcester (Johnson, Standard)
462.575	Tac-2 Communications; Reading, Wilmington (Standard, Regency)
462.675	Rivers Associates, Fitchburg (General Electric)
463.250	A.J. Nielsen, Hanover (General Electric)
463.700	Thomas Communications, Danvers (General Electric)
463.950	Motorola C&E, Boston
464.400	George B. Vorhees, Ashland (General Electric)
483.8875	Edwin Thompson, Lowell (General Electric)
484.0125	Airways Communications, Worcester (General Electric)
484.3125	Motorola C&E; Framingham, Lexington

Motor Carrier

CONNECTICUT TRANSIT FREQUENCIES

From Rick Prelinger ex-(CA-SF-002):

44.52	KCH 602	Connecticut Transit, Hartford
44.56	KCH 601	Connecticut Transit, New Haven
453.425	KAN 479	Wallingford Transit, Wallingford
463.600	WXW 225	Federal Express, Seymour
464.800	WXJ 220	Connecticut Para Transit, New Haven
475.4625	KXN 421	Westport Transit District

BAY AREA AUTOMOBILE CLUBS

From Rick Prelinger ex-(CA-SF-002):

151.835	KSN 672	California State Automobile Association, San Fran.
452.525	KME 395	CSAA, San Francisco
452.550	KME 395	CSAA; San Francisco, San Bruno
452.575	KMF 281	CSAA, Oakland
452.600	KME 395	CSAA, San Francisco
484.5375	KME 395	CSAA, San Francisco
490.3125	KCP 928	CSAA, Oakland
851.0125	KMH 901	CSAA, San Carlos
853.8625	WZV 234	National Auto Club, San Francisco

Mobile Phone/RCC

From RAY CHAFEE (CA-SD-022): KABC-TV, Channel 7, Los Angeles, uses mobile phone frequency 454.300 between their reporters in the San Diego area and the station.

Utility

PART XIII--LOS ANGELES WATER AND POWER SYSTEM

Red Frequency Operations

The red frequency, 48.42, has been assigned to power operations in the Central and East Los Angeles area.

Mobile units with red frequency capabilities may communicate with the following: "Radio" (Radio Telegraph Office, L.A.), "Power" (Electric Trouble, Boyleston), "Patrol" (Transmission and Trouble, Boyleston), "Dispatcher" through Power (System Load Dispatcher, Boyleston), "St. John" (Receiving Station A), "Century" (Receiving Station B), "Fairfax" (Receiving Station D), "Velasco" (Receiving Station F), "Atwater" (Receiving Station G), "Hollywood" (Receiving Station H), "Olympic" (Receiving Station K), and "Market" (Receiving Station P).

Receiving station radios are manned solely by the operator on duty at the receiving station and are tested once a month with "Radio." Receiving station radios do not keep a continuous guard on the frequency.

The following transmitters are normally used for communications by base stations on the red frequency: Lookout Mountain KME 488, Mount Washington KMG 734, and General Office Building KMA 442.

The red frequency transmitter at the General Office Building, KMA 442, is used for emergency communications when the main transmitter, KME 488, is inoperative. It is placed into service by the operator on duty at the Los Angeles Radio Telegraph Office.

Base station operators using transmitters other than Lookout Mountain must identify the transmitter at the end of each series of transmissions. The callsign assigned to each receiving station transmitter will be found at the receiving station operator's console.

Mobile units operating on the red frequency are not required to transmit the FCC-assigned call sign when clearing the frequency. They must, however, transmit their unit designator at least once during each series of transmissions.

COMMONWEALTH EDISON CO. ILLINOIS SYSTEM

From Kevin McLinden (IL-149):

The following map details the radio frequency coordination used by Commonwealth Edison Co. in Illinois. The frequencies used in each zone are listed below.

I	Base-153.710 (T1)	Mobile-153.530 (T5)
II	Base-153.695 (T2)	Mobile-153.455 (T6)
III	Base-153.620 (T3)	Mobile-153.485 (T7)
IV	Base-153.680 (T4)	Mobile-153.425 (T8)

System-wide mobile simplex-153.590 (T9)

CHICAGO - simplex system

X	Chicago North-153.545 (T10)
XI	Chicago Central-153.575 (T11)
XII	Chicago South-153.635 (T12)

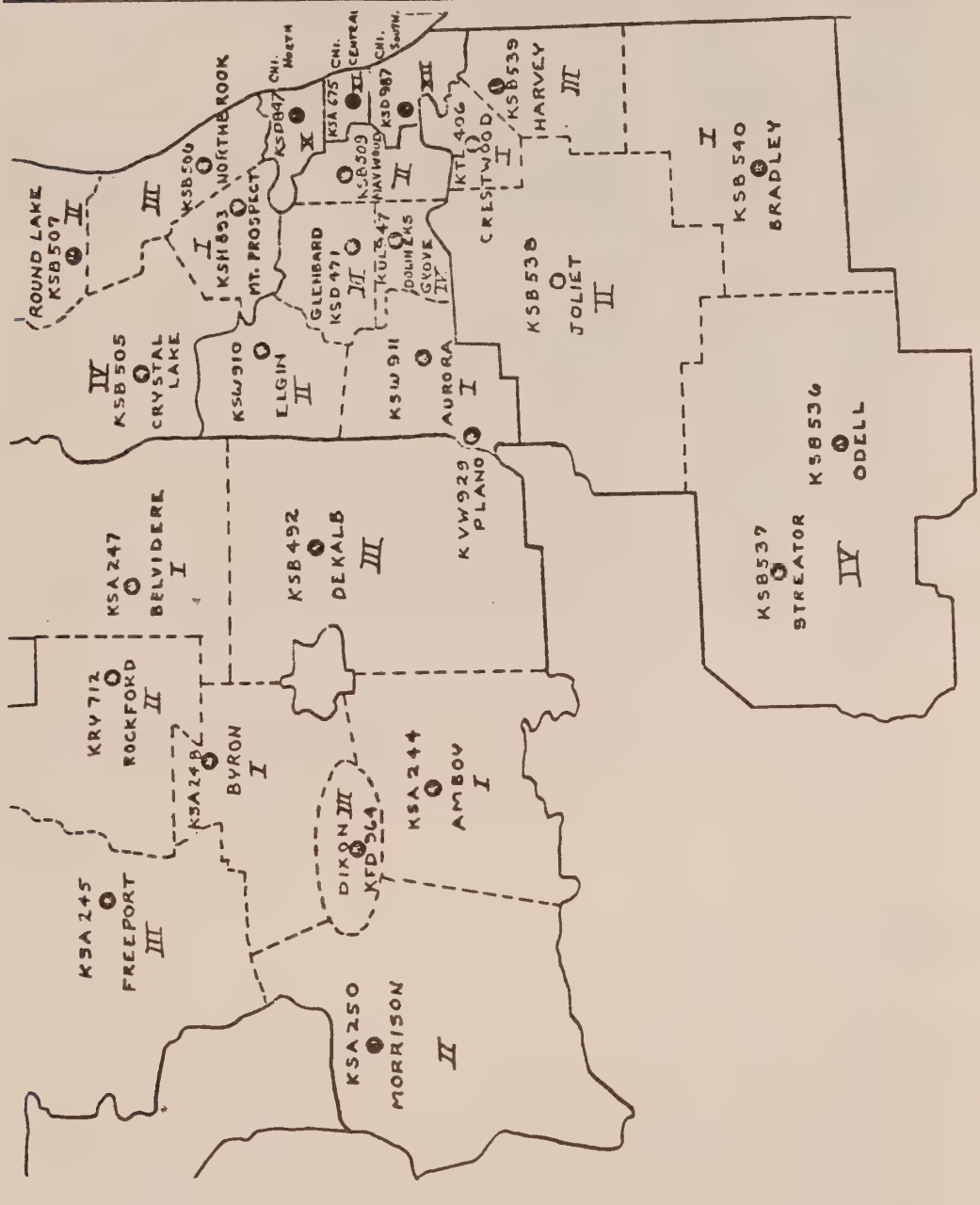
Security

BAY AREA SECURITY AND DETECTIVE AGENCIES

From Rick Prelinger ex-(CA-SF-002):

151.715	KMK695	American Patrol Service (SF)
151.865	KTK401	Cal State Patrol (SF) also KXI641
460.900	KCA977	Burns Security (SF)
461.075	WZF691	Twilight Investigations (SF)
461.125	WRF210	Excalibur Security (SF)
461.200	KUH808	Twilight Security (SF) also WZI499
463.575	KXU832	K B Guard Services (SF)

463.575	KYY558	American Mutual Detective Agency (SF)
463.825	KUJ387	First Foot & Mounted Patrol (SF)
463.850	KEQ213	Hermann Safe Co. (SF)
464.600	KFK344	First Security Service (SF)
483.9125	KNA433	Alert Alarm Co. (SF)
483.9625	KB5592	Aaron Security Systems (SF)
483.9625	KNP817	RC Security (SF)
484.1875	KYD490	Wackenhut Corp. (SF)



From EDWARD SOOMRE:(MA-017): I would like to contact members who have info on New England Power Service frequencies in New England. 1 Alcott Drive, Northboro, MA 01532

489.6625	KNR486	San Mateo Private Patrol (SF)
489.9875	KWU748	Lawrence Security (SF)
151.745	KGL294	Camco Security Systems (Berkeley)
35.06	KJP894	Tru Alarm Systems (Oakland)
44.20	KTV726	Brinks (Oakland)
151.655	KSM628	ABC Security Service (Oakland) also KYF775
151.715	KQS259	American Patrol Service (Oakland)
151.805	KRI262	Detective Intelligence Serv. (Oakland) also KUT842
151.835	KBZ354	Tom King Detective (Oakland)
452.675	KUI741	Purolator Services (Oakland)
460.925	KBT514	Bay Alarm (Oakland)
461.125	KCF289	AHM Security (Oakland)
461.125	KFK965	Apex Alarm Systems (Oakland)
461.200	KDP677	Richardson Security (Oakland)
461.450	WXV550	Life Safety & Security (Oakland)
461.525	WXQ260	Aspen Protection Service (Oakland)
462.575	KAB0332	American Mutual Detective Agency (Oakland)
463.350	KMG725	ABC Security (Oakland)
463.875	KIF483	Warren Security Systems (Oakland)
463.900	KFS413	International Security (Oakland)
464.000	KXP478	Denelect Alarm Co. (Oakland)
464.250	KGR211	Security Technical Service (Oakland)
464.400	KYA767	Private Protection Patrol (Oakland)
464.600	WZF323	San Francisco Security Patrol (Oakland)
464.800	KUR215	Stovalls Security Service (Oakland)
484.0125	KCP998	C & B Security (Oakland)
484.0125	KWZ445	Jonco Sentry Patrol (Oakland)
490.1125	KXS847	Dog Watch Inc. (Oakland)
490.1375	KNP709	Calif. Security Alarm (Oakland)
151.895	KUM477	Fox Security (San Bruno)
154.540	KUW433	Custom Alarm (San Carlos)
483.3625	KNR474	Bel-Carlos Patrol (San Carlos)
483.9375	KYF641	Riley Security (San Carlos)
483.9625	KWV857	California Security (San Carlos) also KXU982
462.150	KTM752	JAX Security Systems (South S.F.)
483.9625	KNR725	Aaron Security Systems (South S.F.)

School

From LARRY VAN HORN (TN-014): Memphis State University police operate on 154.860 and Memphis Board of Education security operates on 158.895.

From GEORGE HOGGATT (CO-007): Denver University security is on 464.475 repeater (469.475 input).

Freak Freqs

A NIGHT AT THE OPRY

From Ray Berry (TX-017):

While in Nashville, Tenn., recently, I visited the Grand Ol' Opry in Opryland, USA, about 10 miles outside of Nashville. The complex includes the Opryhouse, a park and the Opryland Hotel.

A look at the back of one of the security handhelds reveals two channels. One is 464.875 repeater output with 469.875 input. The second channel is 103.500 MHz. This is marked "quiet," and, while not sure, I presume this is used in the Opryhouse during performances. Their call sign is KAB 304.

(Editor's note: The 103.500 freq seems improbable. This is in the FM broadcast band and I doubt any walkie could handle the spread. Besides, there is an FM station in Nashville on 103.3, and would probably cause interference to the 103.5 channel. Perhaps it was 463.500?)

FCC TOPICS

George DuBois, Editor

Send FCC news and information of interest that relates to two-way communications above 30 MHz and questions regarding the FCC Rules and Regulations to: George DuBois, 10048 NE Campaign, Portland, OR 97220.

A flurry of Final Orders were released this last couple months. First off, Part 87 was amended to allow Aeronautical Enroute Stations to use phase-shift digital modulation, without having to have an operator initiate transmissions, keep station logs or identify the station. This will allow ARINC to initiate their proposed automated system where sensors in an airplane will transmit ASCII-encoded data at 2200 bits per second, eliminating the requirement for the pilot to relay this routine information verbally. ARINC anticipates using a single frequency initially, but may switch to a two-channel system, the ground stations on one channel, the airplanes on the other.

The final ok was also given to a paging service in the Special Emergency Radio Service using digital modulation,for LED or tactile (braille) readout of messages. The frequencies involved are 35.02 and 43.64 mHz.

Also given the nod was the use of frequencies already allocated for the Police Radio Service for low-power transmitters for radiodetermination, in other words, "bugs" or "bumper beepers". Any frequency available in this service may be used,on a non-interference basis.

And another Final Order was released reserving 50 two-frequency channels in the 806-821 and 856-866 mHz bands for "slow growth" Public Safety systems (police, fire, highway maint.,etc.). This was considered necessary because in the larger cities 800 mHz channels are rapidly filled by licensees in the Industrial services, mainly the Business Radio Service, and few channels are then available for application by local governments, who must obtain design approval, funding, etc. The original proposal asked for reserved channels for the Power and Telephone Maintenance Radio Services also, but this was rejected. Also proposed were a minimum system size of 200 vehicles and the reservation of a number of channels for trunked systems. These were also rejected as not in the public interest since small systems, as well as large, face the same planning and budgetary delays, although on a lesser scale, and the selection of conventional or trunked systems should be left ot local planners to choose, as appropriate. Public Safety systems at 800 mHz will be allowed as long as necessary to place a system in operation after a license has been issued, instead of the eight months allowed other services, as long as a schedule of implementation is submitted and a showing is made that funding has been obtained.

A draft of the new"plain language" Part 97 was released. Entitled "Amateur Telecommunications Service", it will be divided into four parts. Part A will be the Amateur Radio Service, Part B, RACES and Part C, Amateur Satellite Service. Part D will be Technical Standards. The Commission noted that Part 97 is especcially suited for simplification because its present language is unnecessarily complex and, since there is no age limit in the Amateur Radio Service, the rules must be read and understood by yound persons. The new regulations will be in a question and answer format very similar to Part 95 (CB).

GPO Update

A new Government Printing Office list of FCC publications is out (Subject Bibliography no. SB-281), dated 8/13/80. As can be expected, there sure aren't any price decreases. The Broadcast Operators Handbook is up from $2.60 to $3.00. FCC Rules and Regulations, Vol. 3 (Broadcast Services) is up from $30 to $34, but this is a new edition. Volume 4 (Maritime Services) is up to $24 from $15.75, a healthy jump. Likewise, Volume 11 (Cable TV) went from $8.60 to $15.00. And the exact same edition of "How to Identify and resolve Radio-TV interference" that cost $1.50 last year is now $2.00. (Must be due to high demand.)

If you are interested in the complete lowdown, send a brief note to: Government Printing Office, Wash., DC, 20402. Ask for the "Consumers Guide to Federal Publications" and "Price List 36". When you get the Guide, go through it and pick out the free subject bibliographies you want and send in the form. Each Subject Bibliography lists the publications available by agency or by subject content. Like I said before, FCC publications are outlined in SB-281. When you get the bibliographies you can then order what you want from them. Price List 36 isn't a list, it's a little pamphlet, a condensation of available publications and subscriptions, and of course, their prices. These will give you a pretty good place to start, although some agencies have theri own distribution outlets, such as FAA, NOAA, NTIS, LEAA, etc.,etc.

When I started this column, it was suggested to me that I cover government publications, but faithful readers will note I have seldom done so. This is because, in my opinion, most are not worth buying. When you get your Subject Bibliographies (if you order the same ones I do), you'll find many intriguing titles. Most will turn out to be quite worthless. Many are extremely outdated and are only listed to clear out their stocks or because they are still used by an agency. In SB-281, for example, the first five pages are devoted to the "FCC Reports", clothbound volumes of all FCC actions covering various periods, dating back to 1950! What the hell good are they? Other lists will have similar "white elephants". As you look them over, pay attention to the description, if any, and, in particular, to the date of issue. I wouldn't order any book older than I am. Similarly, the Global Autovon Telephone directory may sound intriguing, but will undoubtedly turn out to be quite useless. Exercise a little care in your selections and you might not be disappointed.

? Beginners ?????? Corner

Have a question? If you are a new scanner listener and don't understand something about monitoring that almost everyone else seems to understand, send in your question. When possible, your question and the answer will be printed. No answers will be sent by return mail. Your name will not be printed. Write to: David E. Crowley, 7234 Balson Ave., University City, MO 63130.

Comments for the month: Some of you have written enclosing stamped self-addressed envelopes. Although I would like to write a personal letter to each of you, my time is extremely limited and if I can respond personally, I'll be glad to pay the postage. Also, sometimes I get questions of considerable complexity or which require a complex and lengthy answer. If I'm not very sure of the answer, or could only speculate, I'll probably return most of these to the sender with a request to contanct another editor. I don't wish to appear rude, but after all, I don't know everything and the column is intended to help beginners. Having said that, here is.....

Image Reception - Friend or Foe? Part 2.
Although image reception can be very useful to those of us with scanners and other broad-band receivers, this kind of reception is embarrassing to the proper operation of most radio receivers. For instance, an FM broadcast receiver can be tuned to frequencies between 88.1 and 107.9 MHz. My FM tuner uses an IF (intermediate frequency) of 10.7 MHz, so when I tune a station at 107.9, the image frequency 86.5 MHz (107.9-2·10.7) is below the 88.1 limit of the tuner and does not interfere, unless the signal at 86.5 MHz is extremely strong. However, if the designer goofed and provided an IF of 9.9 MHz, then when I tuned to the station at 107.9 MHz, a station at 88.1 MHz would compete and interfere: (107.9 - 88.1)/2 = 9.9 MHz.

Now for a practical application of image reception that I use every day with a Bearcat 210 (IF = 10.8 MHz). KSD Radio's traffic airplane broadcasts through a repeater at 450.1875 MHz which enters as 450.187 on the 210. With this setting the large and active Coca-Cola delivery fleet interferes even though its actual frequency is 463.650 (KYY 391). To get rid of the Coke fleet, I program my scanner to 471.7875 MHz (450.1875 + 2·10.8), the frequency for which 450.1875 is the image. Fortunately 471.7875 is not used in this area, so I can here the KSD traffic reports without interference, and , I might add, without having to listen to their AM programming.
For a brief review of the algebra;

(5) $F_i = F_s - 2 \cdot F_{if}$ and $F_s = F_i + 2 \cdot F_{if}$, where;

For the example above,

$F_s = 450.1875 + 2 \cdot 10.8$

$= 471.7875$ MHz

F_s = RF signal frequency to which receiver is tuned,
F_i = Frequncy of its image,
F_{if} = Intermediate frequency and
F_o = Local oscillator frequency.

It helped me to understand image reception when I digested the fact that the receiver tuned in the image mode is receiving an actual RF signal being broadcast on the image frequency, and the receiver must be "mistuned" by an amout equal to twice its intermediate frequency. Now for another application that I use every day. The local police channel 1 is 156.210 MHz. When I use a crystal cut for this frequency, a strong FM station at 107.7 MHz interferes every time the squelch opens in response to 156.210. I tried a variety of tricks, including buying new crystals, to cure this problem, none of which helped. Then a neighbor told me that I needed a specially cut crystal to eliminate this interference. To make a long story short I got the'special' crystal and it cured the problem completely, but it took me awhile to figure out why it worked.

It finally dawned on me that the 'special' crystal tuned my receiver to a frequency of which 156.210 MHz was the image. So;

$$F_s = F_i + 2 \cdot F_{if} = 156.210 + 2 \cdot 10.7 = 177.610 \text{ MHz.}$$

Then to my manual for the crystal formula used by the receiver;

$$F_x = \frac{F_s - 10.7}{3} = \frac{177.610 - 10.7}{3} = 55.6367 \text{ MHz as}$$

opposed to 48.5033 MHz for regular mode reception. Note that

$$3(55.6367 - 48.5033) = 21.4 \text{ MHz} = 2 \cdot 10.7.$$

So to summarize, the image phenomenon gives the scanner owner two important benefits. 1) Out-of-band signals can be received and 2) many interference plroblems can be solved simply and easily. For homework you might try to calculate the limits of frequenies for your scanner that can be received in the image mode.

Aircraft

Maj. Ron Hammer, Editor

Send private, commercial, firefighting and law enforcement aircraft frequencies of interest in the 108-136 MHz range and frequencies in other bands above 30 MHz associated with airports and aircraft plus questions, articles and tips related to aircraft monitoring to: Major Ron Hammer, 821 Elisa Way, Roseville, CA 95678.

Hey, again. As some of you might have noted, there was a column missing last month. For that, I must apologize, but I--along with everyone else in Northern California--had the epizootic flu, or whatever, as did my boss, my wife, my secretary--only the cats seem to have escaped. I cleverly fell ill on my birthday and remained so right through the holiday season. I didn't feel like remaining alive, let alone editing up a column. Sorry.

As a consequence of the above, the mail has backed up somewhat, so without my usual ramblings, let's try to get at least some of it answered. Way back I had a card from William Stookey (HI-001) in Honolulu listing some company freqs for Honolulu International there in the Sandwich Islands:

460.7	MHz-Hawaiian/Aloha	129.9	MHz-Aloha
460.725	-United	130.9	-Continental
460.85	-Hawaiian/Continental	131.2	-Korean
460.775	-Korean	131.45	-Western/China
129.0	-Canadian Pacific	131.65	-Northwest
129.5	-Hawaiian/Aloha	131.8	-Japan

I do not know what their crash frequency is. (I also do not know what their snow removal equipment frequency is!--that's a little joke.) Many's the time I transited Honolulu/Hickam AFB on my journeys to and from the Pacific. The first time, in 1955, many of the buildings there were still well pock-marked with bullet holes from the fracas there in 1941.

Also from some time back, Rod Bourne (VA-012) from Arlington, VA lists some freqs for both Boston's Logan International and Washington metro area. Rod is an ATC System Planning Specialist and lists a number of freqs of which space will only permit a few of the less available:

BOSTON/ BEDFORD		WASHINGTON, DC	
120.0	MHz-Boston Air Associates	130.82	MHz-Eastern Shuttle Ops
123.2	-Raytheon Corp.	130.8	-Altair/Baltimore Ops
123.3	-Commerford Aviation	131.65	-Ransome/Empire
123.4	-Tech Aero Service		
123.5	-Jenny Beechcraft	143.1	-Pentagon Tower (Unconfirmed)
128.275	-Lincoln Lab		
129.175	-Bar Harbor Airlines		
129.4	-Logan Intl. Ramp Cont.		
129.95	-Jenny Beechcraft		
130.35	-Merrimack/Digital Heli's		

David Branscome (OH-009) from Newark, OH writes concerning what he perceived to be some negative feelings about CB radio on my part, although in the end he agrees that there are, indeed, many idiots on the CB bands. Unfortunately, there are idiots in any organization, hobby, group or whatever--from the Boy Scouts to the Ku Klux Klan. Some times they dominate, sometimes they are less noticable (and offensive). Flying is sort of self-policing in that if one is very much of an idiot he will likely, in time, seriously kill himself--thereby removing the problem. (Or at least he will get grounded and his wings pulled off.) So, what happens on CB--some beat le-brain gets himself a thousand-KW linear amp, jumps on

some illegal frequency and gets into a swearing contest with some other mental-midget in Addis Abbaba--ruining the hobby for everyone in a three-state area. It's a hobby that one bad apple can ruin the impression of the hobby for the other 999 apples who have to listen to the garbage-mouth. I am NOT down on CB per se. By the time you read this I will have a CB set, although only a small one--probably won't even be able to raise an eight year old blatherskite down in Caracas, Venezuela from here.

David, I enjoyed your letter and your comments. I guess you'll just have to "struggle along" with your BC-300 and 50 ft. tower. That's not a bad beginners set-up for listening to airplane talk! Wait till you get serious!

The venerable Larry A. Smith (MI-001) of Royal Oak and Pigeon, MI (known to the RCMA old-timers as a former editor) writes frequently. The Strategic Air Command has not been big on VHF freqs since I was a little kid. I don't believe that B-52's (or possibly even KC-135's) even have VHF capability. The old KC-97's that I flew did--I still have my old check-list insert with the 8th Air Force (Westover AFB, Mass.) frequency channelizations--but that was just before the turn-of-the-century. SAC Command Posts have been on 311.0 and 321.0 MHz just slightly short of forever. SAC never seemed to care who knew what freqs they used (except for a few clandestine reconnaisance freqs--I'm sure). While recon is sneaky, dropping bombs was fairly straightforward. Anything classified was encrypted (and still is) and all co-pilots use to carry a little 5¢ ("Captain Midnight") decoder device. I'd admit that I still have one around here somewhere, but maybe I gave it to my kid about 15 years ago. The system worked pretty well, but was slow. I have no idea what they use now, but their freqs are widely available. Any further inquiries should be directed to Bob Grove (military) or Chris Devendorf (HF) as I am suppose to babble about VHF ATC freqs, only.

Larry Smith sends along a page listing the National Weather Service's network of in-being and planned NOAA Weather Stations. These stations do not transmit just aviation weather, but give all kinds of things, such as tide reports (although not in Kansas, I suppose), etc. Radio Shack makes a number of little portables for $12.95 up to $49.95 for reception of these weather reports. I looked at five of them just the other day that receive only 162.400/162.475/162.550. I hope this page he sent reproduces so it is readable. You have to really live out in the weeds to not be able to receive one of these stations.

I had a card from Gary Mondfrans of MONITOR CONTROL, 990 El Camino Real, San Bruno, CA 94066, saying it was he who bought Bob Grove's URR-35 UHF receiver on my recommendation. He says he gets Moffett and Alameda Naval Air Station traffic, maneuvers, target practice and some "unusual" transmissions. Bob advises not to bemoan missing out on his old URR-35 set as Grove Enterprises, Inc. is soon going to be out with their own 225-400 MHz out-of-band frequency converter. Beyond that, perhaps this Spring, they plan to release their own UHF tunable aircraft band receiver! No further details are known as to price, features, etc., but this comes direct from the President of Grove Enterprises (not via his wife through mine.) But, there I go, talking about UHF freqs, again.

Bob kindly sent me a courtesy copy of his "Federal Frequency Directory" ($14.95 plus $3.00 U.P.S.) It has a zillion frequencies! Well, actually, more like 100,000--from 2,000 KHz through 420.000 MHz. I haven't had time to get into it much, but the freqs are listed by ascending number--hence you've got to already know the frequency to look up who uses it. You can extract a freq. if you know about what it is by scanning a few pages--which would usually be the case. I wouldn't recommend trying to read through the book to pick out everything listed for your local area--unless you've got an awful lot of time and are very near-sighted. It seems to list all kinds of things like middle markers (75 MHz), ILS, VOR, Glide-Slopes, etc. for those who groove on listening to continuous morse-code I.D.s. Where else are you going to get 5,571 Federal Government freqs per dollar bill? I'll write more on it after I've perused it a bit more.

Richard Prelinger (CASF-002) now relocated in New York City (from California to NYC!?) sends an excellent listing of NYC area freqs keyed mostly to JFK or La Guardia. It is a pure pleasure to receive something such as this that does not have to be either deciphered or re-typed. It goes into the column

directly as received. Thanks, Rich, you're an editor's pal. I believe I have noted every single piece of mail I received in 1980. If I've missed one, please forgive me, but I get about 500 pieces of mail each year besides the RCMA mail, so a few things do fall through the crack,on occasion. My good little bride trys dutifully to separate my personal mail, gun collector's mail, family bills, other radio mail, junk mail, work-related mail and RCMA mail, but it is overwhelming. All my life if I've been remotely interested in something, I've joined a club or organization (or two, or ten) concerned with that interest. I'm 44 years old. Do you know how many clubs that's been!?

Next month--the January/February mail. Keep the faith. I'm trying. I have a good friend from my Air Force days who is currently a Defense Communications Agency-Europe communications officer in Stuttgart, Germany. He visits here occasionally (you get around in the A.F.) and expresses amazement at what all is monitored by hobbyist and the data that are passed around in "newsletters" such as ours, here. He said he'd worked in "Secure Voice" for years and now finds out that there are whole clubs full of guys listening in to everything in the electro-magnetic spectrum--just for fun. Wait till he sees my new micro-wave scanner! (Ha)

NYC AREA AIRLINE BUSINESS FREQUENCIES

151.685	KBN870	American
151.715	KJH489	TWA/JFK
460.650	KLO569	Pan Am/JFK
460.675	KAV973	TWA/La Guardia
	KET416	TWA/JFK (also KLY661)
460.700	KJY411	USAir/La Guardia
	KLJ669	Braniff/JFK
460.725	KJX291	United/La Guardia
	KDD677	United/JFK
460.750	KLN587	Eastern
460.775	KBS349	Aera Inc./JFK
	KFH397	American (also KSK529)
460.800	KQR790	SAS Communications/JFK
	KLQ376	Aeronautical Radio
460.825	WYH801	Yugoslav Airlines/JFK
	KEJ390	Delta (also KZA754)
460.850	KXI735	Air New England/La Guardia
	KQQ641	Seaboard World/JFK
	KFD295	National
	WSK345	Northwest
460.875	KLK380	Lufthansa/JFK
	KVP954	USAir/JFK
	KKH757	National
461.375	WYV887	Korean Airlines/JFK
461.500	KBL966	Allied Aviation Services/JFK
461.750	KEH248	TWA/JFK
462.700	KAB1353	Iran Air/JFK
462.850	KEH717	Pan Am/JFK
464.000	KEJ681	Pan Am/JFK (also KGK473)
464.325	KYJ672	Allied Aviation Services (JFK)
	KRP548	Aeronautical Radio (also WXC474)
464.375	KRP547	Aeronautical Radio
464.425	KGO819	Aerlinte Eireann/JFK
	WRB972	Inflight Services/JFK
464.525	KLN448	El Al/JFK
464.700	KJS999	Icelandia Communications/JFK
464.775	KKY802	Laker/JFK
	KIC598	Alitalia
	KJQ634	Eastern
464.825	KQX915	Lufthansa/JFK
	WRL271	Marriott In Flite/JFK

464.875	KFK215	Servair/JFK
	KSK800	Pan Am/JFK
464.900	KRR452	Allied Aviation Services/JFK
464.925	KGH945	Air France/JFK

(all from FCC files as of 8/80; listings without airport locations not specified as to location beyond "New York" in official lists)

NWR NETWORK

Planned NOAA Weather Radio Network Fall 1979

Legend—Frequencies are identified as follows:
(1)—162.550 MHz;
(2)—162.400 MHz;
(3)—162.475 MHz.

Location	Frequency
Alabama	
Anniston	3
Birmingham	1
Dozier	1
Florence	3
Huntsville	2
Louisville	3
Mobile	1
Montgomery	2
Tuscaloosa	2
*Demopolis	3
Alaska	
Anchorage	1
Cordova	1
Fairbanks	1
Homer	2
Juneau	1
Ketchikan	1
Kodiak	1
Nome	1
Petersburg	1
Seward	1
Sitka	2
Valdez	1
Wrangell	2
Yakutat	1
Arizona	
*Flagstaff	2
Phoenix	1
Tucson	2
*Yuma (P)	1
Arkansas	
Ash Flat	2
Fayetteville	3
Fort Smith	2
Gurdon	3
Jonesboro	1
Little Rock	1
Star City	2
Texarkana	1
California	
*Bakersfield (P)	1
*Barstow	2
Coachella (P)	2
Crescent City/ Brookings, OR	1
Eureka	2
Fresno	2
Los Angeles	1
*Merced	1
Monterey	2
Point Arena	2
*Redding (P)	1
Sacramento	2
San Diego	2
San Francisco	1
San Luis Obispo (P)	1
Santa Barbara	2

Location	Frequency
Colorado	
*Alamosa (P)	3
*Colorado Springs	2
Denver	1
*Grand Junction	3
*Sterling	2
Connecticut	
Hartford	3
Meriden	2
New London	1
Delaware	
Lewes	1
District of Columbia	
Washington, D.C.	1
Florida	
Daytona Beach	2
Fort Myers	3
Gainesville	3
Jacksonville	1
Key West	2
Melbourne	1
Miami	1
Orlando	3
Panama City	1
Pensacola	2
Tallahassee	2
Tampa	1
West Palm Beach	2
Georgia	
Pelham	1
Athens	2
Atlanta	1
Augusta	1
Chatsworth	2
Columbus	2
*Macon	3
Savannah	2
Waycross	3
Hawaii	
Hilo	1
Honolulu	1
Kokee	2
Mt. Haleakala	2
Waimanalo (R)	2
Idaho	
Boise	1
Lewiston (P)	1
Pocatello	1
*Twin Falls	2
Illinois	
*Champaign	1
Chicago	1
Moline	1
*Marion	3
Peoria	3

Location	Frequency
Rockford	3
Springfield	2
Indiana	
Evansville	1
Fort Wayne	1
Indianapolis	1
Lafayette	3
South Bend	2
Terre Haute	2
Iowa	
*Cedar Rapids	3
Des Moines	1
*Dubuque (P)	2
*Fort Dodge	2
*Sioux City	3
*Waterloo	1
Kansas	
*Chanute	2
Concordia	1
Dodge City	3
*Ellsworth	2
Colby	3
Topeka	3
Witchita	1
Kentucky	
Ashland	1
Bowling Green	2
Covington	1
Hazard	3
Lexington	2
Louisville	3
Mayfield	3
Somerset	1
Elizabethtown (R)	2
Pikeville (R)	2
Louisiana	
Alexandria	3
Baton Rouge	2
Buras	3
Lafayette	1
Lake Charles	2
Morgan City	3
New Orleans	1
Monroe	1
Shreveport	2
Maine	
Ellsworth	2
Portland	1
Maryland	
Baltimore	2
*Hagerstown	3
*Point Lookout	2
Salisbury	2
Massachusetts	
Boston	2
Hyannis	1

Location	Frequency
Michigan	
Alpena	1
*Ononcaga	2
Detroit	1
Flint	2
Grand Rapids	1
*Houghton	2
Marquette	1
Sault Sainte Marie	1
Traverse City	2
Minnesota	
Duluth	1
International Falls	1
Mankato	2
Minneapolis	1
Rochester	3
Thief River Falls	1
Willmar (P)	2
Saint Cloud (P)	3
Mississippi	
Ackerman	3
Booneville	1
Bude	1
Gulfport	2
Inverness	1
Jackson	2
McHenry	3
Meridian	1
Oxford	2
Columbia (R)	2
Missouri	
Camdenton	1
*Columbia	2
Hannibal	3
*Joplin/Carthage	1
Kansas City	1
St. Joseph	2
St. Louis	1
Springfield	2
*Sikeston	2
Montana	
Billings	1
*Butte	1
Glasgow	1
Great Falls	1
*Havre (P)	2
Helena	2
*Kalispell	1
*Miles City	2
*Missoula	2

CONTINUED

Location	Frequency
Nebraska	
*Grand Island	2
*Lincoln	3
*Norfolk	1
*North Platte	1
Omaha	2
*Scotts Bluff	1
*Merriman	2
*Bassett	3
*Holdrege	3
Nevada	
*Elko	1
*Ely	2
*Las Vegas	1
Reno	1
Winnemucca	2
New Hampshire	
Concord	3
New Jersey	
Atlantic City	2
New Mexico	
Albuquerque	2
Clovis	3
Farmington	3
Hobbs	2
Ruidoso	1
Santa Fe	1
New York	
Albany	1
Binghamton	3
Buffalo	1
New York City	1
Kingston	3
Rochester	2
Syracuse	1
North Carolina	
*Asheville	2
Cape Hatteras	1
*Charlotte	3
*Fayetteville	3
New Bern	2
*Raleigh/Durham	1
*Rocky Mount	3
Wilmington	1
*Winston-Salem	3
North Dakota	
*Bismarck	2
*Dickinson	1
Fargo	2
*Jamestown	1
*Minot	1
*Petersburg	2
*Williston	2

Location	Frequency
Ohio	
Akron	2
Caldwell	3
Cleveland	1
Columbus	1
Dayton	3
Lima	2
Sandusky	2
Toledo	1
Oklahoma	
Clinton	3
*Enid	3
Lawton	1
*McAlester	3
Oklahoma City	2
Tulsa	1
Oregon	
Astoria	2
Coos Bay	2
Eugene	2
*Klamath Falls	1
*Medford	2
Newport	1
*Pendleton	1
Portland	1
*Roseburg	3
*Salem	3
*The Dalles	2
Pennsylvania	
Allentown	2
*Johnstown	2
Erie	2
Harrisburg	1
Philadelphia	3
Pittsburg	1
Clearfield	1
Wilkes-Barre	1
Williamsport (P)	2
Puerto Rico	
San Juan	2
*Maricao	1
Rhode Island	
Providence	2
South Carolina	
Beaufort	3
Charleston	1
Columbia	2
Florence	1
Greenville	1
Myrtle Beach	2
Sumter (R)	3
South Dakota	
*Aberdeen	3
*Huron	1
*Pierre	2
*Rapid City	1
*Sioux Falls	2

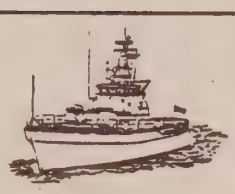
Location	Frequency
Tennessee	
Bristol	1
Chattanooga	1
Cookville	2
*Jackson	1
Knoxville	3
Memphis	3
Nashville	1
*Shelbyville	3
Waverly	2
Texas	
Abilene	2
Amarillo	1
Austin	2
Beaumont (P)	3
Big Spring	3
Brownsville	1
Bryan	1
Corpus Christi	1
Dallas	2
Del Rio	2
*El Paso	1
Fort Worth	1
Galveston	1
Houston	2
Laredo	3
Lufkin	1
Lubbock	2
Midland	2
Paris	1
Pharr	2
San Angelo	1
San Antonio	1
Sherman	3
Tyler	3
Victoria	2
Waco	3
Wichita Falls	3

Location	Frequency
Utah	
*Cedar City	2
*Logan	2
*Roosevelt	2
Salt Lake City	1
Vermont	
*Brattleboro	3
Burlington	2
Virginia	
*Lynchburg	2
Norfolk	1
Richmond	3
Roanoke	3
Washington	
Neah Bay	1
*Richland	2
Seattle	1
*Spokane	1
Yakima	1
West Virginia	
Charleston	2
Clarksburg	1
Wisconsin	
Menomonie	2
Green Bay	1
La Crosse	1
Madison	1
Milwaukee	2
Wausau	3
Wyoming	
*Casper	1
*Cheyenne	3
*Lander	3
*Rawlins	2
*Rock Springs	1
*Sheridan (P)	3

Notes:

1. Stations marked with an asterisk (*) are not operational but should be in operation prior to or during Fall 1979.
2. Stations marked (R) are low powered experimental repeater stations serving a very limited local area.
3. Stations marked (P) operate less than 24 hours/day.
4. Occasionally the frequency of an existing or planned station must be changed because of unexpected radio frequency interference with adjacent NOAA Weather Radio stations and/or with other government or commercial operators within the area.
5. The list of operating stations is updated periodically. For a current list please write:

NOAA
National Weather Service
8060 13th Street
Silver Spring, MD. 20910
Attn: W112



VHF Marine

Rod O'Connor, Editor

Send information, articles, frequencies and how they are used, and questions that relate to private, commercial, and Coast Guard VHF maritime and inland waterways radio communications to: Rod O'Connor, USGC Group, 259 High Street, South Portland, Maine 04106.

No information has been received for the past few months, therefore I have nothing to pass on to members.

If no further material is received within the next couple of months, I will probably discontinue this column.

International

Richard Stein, Editor

This column is for reporting two-way communications frequencies above 30 MHz, radio system details, monitoring experiences and any other information relating to monitoring in countries other than the United States and Canada.

Send to: Richard Stein, 456 Barrymore Pl., North Brunswick, NJ 08902.

There is no frequency information this month, so let's go into the mailbag. Larry (MI-001) had some questions about International Reply Coupons (IRC's) and sending mail overseas.

IRC's are coupons which are used to provide payment of postage from a foreign country. These coupons are exchanageable for stamps representing the minimum postage for an unregistered letter sent by SURFACE mail to a foreign country. The current coupon (C-22) costs 42 cents here in the U.S. They are available at any post office and can be used in any country of the Universal Postal Union (UPU).

I use IRC's to provide postage in those cases where a SASE using US postage is impractical. I also use these coupons for payments in foreign countries, since these IRC's are readily negociable. That is, they can be converted into mint stamps at the receiving country, or can be forwarded again to someone else for payment.

In answer to another of Larry's questions, I would recommend sending international mail only by air. As of January 1, 1981, the International air mail rate for each 1/2 ounce increased from 31 to 40 cents. Letters sent by surface mail take 6-8 weeks to arrive. By air, the usual time is 7-10 days from most parts of the world, although mail from Northern Ireland has been taking 14-21 days and mail from Cuba almost 3 months beyond the postmarked date. (I don't know which government is holding up the letters).

Thanks to Charles (NZEL-001) in New Zealand, we have a new member in Indonesia, Yoop Koesman. I received a most interesting letter from Yoop including two pages of translation of Indonesian Foreign Office RTTY traffic that I had received. A copy of this reception was forwarded to Yoop by way of New Zealand. I hope to be able to put the information together and send it in to the Utility Column. It's a fine piece of explanation containing some of the more common terms seen in these Indonesian transmissions. I had considered trying to translate this myself using an English-Indonesian dictionary, but I didn't. I'm glad since many of the terms are acronyms and I would never have found them.

One of the interesting and enjoyable benefits of being a column editor is the communication that one has with many club members. This comes by way of letters and sometimes phone calls. I've had many calls over the past year or so- Larry Smith and Tony Loving are frequent callers. A couple of weeks ago, however, I really had a long distance call from David Ramsey (001NIRE). (Fortunately, David works for the British equivalent of Ma Bell).

I learned two interesting facts from this call. The first is that David is using a tuneable converter with his BC-220FB that allows coverage of 225 to about 300 MHz, although without exact frequency readout. He has copied some traffic which seems to be USAF stuff and some NATO exchanges in his area. The other thing is that his BC-220FB (a unit made

for European markets and having coverage of 66-90MHz in place of 30-50MHz), will receive both the European band AND the US low band of 30-50MHz. Because the set is tuned for the upper portion,sensitivity in the 30-50 area is somewhat reduced. This information has been confirmed by Barry Bennett and Gordon Newell, both RCMA members, who sell and service scanners. I have requested information from Electra, but have yet to hear from them.

I would like to get a hold of a unit that will receive 66-90. I'm curious about possibly governmental or military use of these frequencies in this country and the possibilties of low band skip from Europe.

Peter Hegan (002-NIRE) writes about his SX-200. (You all remember that receiver, don't you?) This is only a preliminary report. His unit is back with the distributor, a very bad start since he's only had the radio since September. Peter writes that the unit is heavy and interpretation of the instruction sheets is rather difficult since the information is not presented clearly . The English wording is not good and diagrams are generally lacking. This is in sharp contrast to both the Regency and Bearcat manuals. Trial and error and a good deal of luck are needed to learn how the unit operates.

Using a Hustler discone, the unit is lacking is sensitivity especially between 55-88MHz. Comparing the SX-200 with a BC-220FB on a station at 82.000 MHz, on AM, the BC delivered a good signal. The SX-200 seemed to malfunction when using the fine tuning adjustment.

The SX-200 would skip active channels in the scan mode if the squelch is not set perfectly and this squelch control is dependent on the fine tuning control setting and visa-versa. In addition to the FRONT squelch control, there is a separate 3 position squelch setting at the REAR of the unit. (Can you believe this!)

Another annoying feature is that after setting searching limits and then going to scan mode, the searching limits have to be re-entered if you wish to search again. In other words, the search limits are lost once you go to scan mode.

Peter returned his unit because, after setting the unit on search with an upper limit of 512MHz, the unit continued to 740.000MHz after 30 minutes, and at last look was still climbing. When the unit was turned off and then on again, the UHF and 27MHz bands were inoperative. It really appears that there a NUMBER of serious problems with the SX-200 in both operation and reception. I hope that JIL will consider making a few improvements and changes in this unit before it's released here.

Until next month, 73s

P.S.- just after I finished this column I received a reply from Electra. Here is the information- it doesn't seem to agree with what Peter and the others have reported.

> ....concering the European band coverage of Bearcat 220FB and Bearcat250FB receivers. Some early versions of the BC 220FB will program and search the 30-50MHz band as a result of a of a peculiarity in the IC, however, the VCO will not operate in that range, and thus will not receive frequencies that low. This also holds true for the BC 250FB which will not receive frequencies between 30-50MHz.
>
> A change in frequency coverage to add the 30-50MHz band to either the BC 220FB or the BC 250FB would require a rewriting of the software for the IC. Electra has no current plans to undertake this revision.

I know for a fact that David Ramsey has received low band skip using his BC 220FB in the 30-50MHz band from both the New York City and Baltimore areas. I'll leave you all to draw your own conclusions.

חג שמח-חג הפורים

CANADA

Send Canadian frequency information. radio system details, and other information relating to Canadian monitor radio listening and questions to: Robert Berezowski, 5832 Dalhousie Drive NW, Calgary, Alberta T3A 1T1 Canada

To start off with this month I have some information from a couple of members about new radio systems that are being installed. First from Chris (CAN-061) comes this info on a new OPP system:

> "About two months ago I worked on a news story concerning their new system. I interviewed the director of OPP communications C.L. Collison. He told me that the new system was on the drawing boards with the tenders to go out in a year. The new system will cost $20 million and it's expected to be in operation in 3 years. I asked Mr. Collison if the OPP was planning to use a DVP system but he laughed that one off saying it is way out of their league because of the exorbitant costs, adding that one mobile DVP unit costs about 3 thousand dollars. He said the only agencies that can handle the costs are the RCMP security service and the Department of National Defence. He wouldn't go into detail about the system but from what I gathered it will be a multi-frequency system with phone patch capabilities. He also told me the current radio system has been in use since 1948."

From Gilles (CAN-004) comes this information on another new system:

> "The Montreal Urban Community Police, which serves the 29 cities of the Island of Montreal, have started to build a new communications centre. The present centre located at Police Headquarters (750 Barsecours St. in old Montreal) will be closed when the new centre goes into operation in 1983. The new communications centre will be located at present Police Station 24 (944 St-Paul West). The Police Station will close leaving only the communications centre in the two story building. The cost of the new system is about $35 million and will use UHF frequencies in the range 406-420 MHz."

And from Doug (CAN-041) and myself comes word that the Calgary Fire Dept. is installing a new UHF system in the 413 MHz region. The system will consist of 4 zone repeaters (in conjunction with 21 satellite receivers and voting equipment) for enroute communications between the Fire units and ambulances and their respective dispatchers. For on-scene communications (tactical fireground) there are 4 channels available, either simplex or duplex through

a mobile repeater. For communications between the ambulances and hospitals (ie ECG, vitals) a system of 3 repeaters will be used in the 450-470 MHz range. The project also includes the installation of computers in the fire stations, dispatch centre and the mobiles. The tenders have already gone out and will have closed by the time you read this. The cost of the system is about $1 million and I expect it to be in operation within a few months.

If any member has any information on any of the above new systems please send it in and I will print it. Unless you have previous knowledge about the new system it can be very frustrating the day they switch over trying to find them again. So please, send it in.

Chris has also supplied some information on the Weatheradio Canada network. The following information appeared in the new publication "Environment Update" from the Ministry of Environment. Already served by the network are Gander, Moncton, Halifax, Montreal, Toronto, Winnipeg, Regina, Vancouver and soon Edmonton. When completed the network will supply weather forecasts and warnings to 80% of Canadians. In addition the Government of Nova Scotia agreed to share the costs of establishing repeater stations to cover all of Nova Scotia. The article does not say when the network is expected to be completed. I have written to the manager of the Information Team of the Atmospheric Environment Service for more information on the network, including a schedule of when the stations are expected to be completed. Let's keep our fingers crossed and if I get anything I will certainly pass it on.

Chris also passed on a copy of "Code 4" in which the following article appeared:

Ottawa's Central Dispatch, already a major centre handling about 37,000 calls per year, will expand its capacity in the near future by adding several new municipalities to its service region. Carlton Place, Almonte and Alfred are the services to be dispatched from the centre, which has expanded its facilities at 62 Bruyere Street in Ottawa.

Fred Rusk, eastern regional manager in the Ambulance Services Branch, said new and sophisticated equipment has been added to the Ottawa dispatch centre.

"New repeating towers have been erected in three locations," he pointed out. "And all vehicles now have new portable UHF radio equipment that interfaces with VHF and permits communication with the main base. This will give ambulance officers on duty more mobility while remaining in radio contact. In addition to this equipment, the smaller services will have their own paging systems for officers who are on call."

Rusk said that the equipment is a new generation of communications systems being used in ambulance work. "Eventually every major area of Ontario will be covered by this new technology."

The official opening of Ottawa's Central Dispatch will take place later this year.

That article appeared in the Autumn 1980 issue of Code 4, which is a quarterly newsletter published by the Ontario Ministry of Health for the Ambulance services in Ontario. It deals with the various activities of the ambulance services and personnel. If you are interested in this sort of thing you may try to get a subscription. I don't know if it is available to the general public or how

it is circulated, but you can write to:

Code 4
Ministry of Health
Communications Branch
9th Floor, Hepburn Block
Queens Park
Toronto, Ontario M7A 1S2

I can't quarantee anything but you can try.

Also from Chris:

Elliot Lake	Police		154.310
	Public Works		169.170
	Ontario Hydro		49.600
	North Shore Ambulance		150.100
	Ambulance Paging		149.400
	North Shore Paging Services		163.440
	OPP	Base	42.060
		Mobile	42.220
	Uranium Mines 163.010	163.350	163.860
	CKNR STL to Elliot Lake	CJZ 282	159.720
	STL (Blind River)	CJZ 283	159.720
	STL (Espanola)	CJZ 284	159.720
	Radio Telephone (not mobile)		152.530
			152.500
			152.750
			164.250

Gilles also passes on this bit of advice for any listener in the Montreal area who does not understand French. Many of the transmissions in that area are French and Gilles suggests that you listen to 162.330 (CJAD 800 English Radio) and 450.875 (CFCF TV). If anything important happens they start talking about it right away. CFCF TV gives more details and if it is a really big event it is worth listening to their helicopter on 450.075. Thanks a lot for the tip Gilles, it will really help anyone in Montreal who do not know french (such as myself).

Now here is some more of the lists I have been printing for the B.C. mainland and region:

Security Services	Barnes Security Services	VGH221	(R)167.305
	Kaban Enterprises Ltd.		(S)150.305
	Knight Security (Walkie-Talkies)		S 167.785
	(Mobile Patrols)		R 452.9875
	Pacific National Exhibition		(S)162.360
	Pinkerton's Security		(R)164.355
	Simon Fraser University		(R)452.950
	Uniguard Services		(S)168.930
	University of B.C. Security		(S)155.265
	Vancouver General Hospital		(R)460.400
	Vancouver Security Patrol		(R)171.630
Taxicabs	Advance Cabs		164.670
	Blacktop Cabs	#1	166.110
		#2	166.350
	Bonny's Taxi		162.150
	Coquitlam Taxi		164.310
	Deep Cove Cabs		163.740
	Maclures Cabs		162.510
	North Shore Taxi		150.865
	Richmond Cabs		162.900
	Royal City		165.390
	Yellow Cabs	#1	167.370
		#2	166.920
Towing	BC Auto Assn. Road Svc	(R)465.7375/	460.7375
	Tritow Services		(R) 451.7375
	Unitow Towing		164.100

Airwest, United Air (Vancouver Harbour Seaplane Base)	142.005
Granville Island Public Market (Maintenance)	164.220
Motorola Electronics	154.460
Vancouver Cablevision	162.060

B.C. Telephone Co. Mobile Phone
Abbotsford JS
Chilliwack JK
Newestminister JL JW
Richmond YS
Vancouver JP YJ YS JR

(For the frequencies of the above channels see November 1980 RCMA)

Maritime Mobile Phone

	Shore	Ship
#23 Vancouver/Courtney	161.750	157.150
#24 Vancouver	161.800	157.200
#25 " /MadeiraPk	161.850	157.250
#26 " /Comox	161.900	157.300
#86 " /Victoria	161.925	157.325
#27 Nanaimo	161.950	157.350
#87 "	161.975	157.375
#28 Bellingham, Wash.	162.000	157.400
#88 (Proposed 1979)	162.025	157.425

Whew! That's it for the B.C. lists that I have. If any member has anything to add to that or any of the installments I have printed over the last several months please send it in and I will publish it. From Steve (CAN-047) is just such a correction. Concerning the conflict with Richmond TAC 2, Steve says that the frequency 139.320 is not Richmond but Coquitlam TAC 2. Richmond TAC 2 is 139.380. Concerning Aldergrove 140.130, Aldergrove is not a seperate detachment but is the repeater name. Nanaimo RCMP is being heard on repeater outputs 140.310 and 140.370. Courtney RCMP is being heard on a repeater output of 140.400. Steve believes that they are switching from their old 153-155 MHz frequencies. He also says that they must have a really good radio site as he is hearing them on the mainland with a small "back of set" antenna.

Steve also supplied the following for the Vancouver area (I should have slipped this above):

Business Repeaters

Western Radio	in	168.450/164.430 out
" "		168.390/164.370
" "		167.130/163.470
" "		167.490/164.355
Distacom		? /163.740
"		? /164.520
"		173.400/171.630
"		159.490/167.305

Maritime Mobile Phone (aboard BC Government and CP Ferries)

Ship	Shore
459.0875	454.0875
459.1375	454.1375
459.1875	454.1875
459.3375	454.3375

Steve is not sure the above list of marine mobile phone is complete or not.

Gilles(CAN-004) supplied a list of Fire Dept. frequencies for the Montreal area but I will have to wait until next month to print them. I also have a long list of RCMP channels from Guy(CAN-031) that will have to wait as well unfortunately. I also have some stuff on Saskatchewan that I might be able to fit in next month. Anyway, I hope you enjoyed this month's column. The only thing that keeps it going is you, the member, and I would really like to hear from you. Until next month, happy monitoring.

under 30 MHz

Chris Devendorf, Editor

Shortwave Utility

This column is for reporting RTTY, CW, MCW, SSB, AM and FAX reception reports, explanatory notes, articles, and questions related to frequencies below 30 MHz. Services covered in this column will be military, civilian aeronautical, coastal/maritime, SSB broadcast feeders, government, beacons, weather, voice markers, time/frequency stations, etc.—essentially everything except broadcast, CB and amateur radio. Send to: Chris Devendorf, 29261 Buckhaven, Laguna Niguel, CA 92677. If you need a Shortwave Utility report form, please enclose a SASE with your request.

MIKE (NJ-066) writes the following: I think I can help with the mystery station Bob Trivalos reported in the Jan. column. Around 510 and 1610 khz, some parks, airports and other public places have established Travelers Information Service (TIS) stations. These are usually powered 1 or 2 watts into a monopole or verticle antenna. They run tape loops which can contain info such as parking restrictions, camping and other general types of information. Any other questions on this could best be answered by members of the IRCA or the NRC.

INFO

CANADIAN MILITARY AERONAUTICAL COMMUNICATIONS SYSTEM (MACS)

Michel Lecompte (O17CANA) has supplied the following excellent list:

LAHR (Germany)

Voice Call: LAHR MILITARY
CW Call: VEG

Frequencies (CW/USB):
3092 4704 5690 6705 9006 11233
13231 13257 15031 18012

EDMONTON (Alberta)

Voice Call: EDMONTON MILITARY
CW Call: VXA

Frequencies (CW/USB)
3092 4704 5718 6705 9006 11233
13257 15031 17995 18012
Weather Broadcasts (USB)
6753 15035

TRENTON (Ontario)

Voice Call: EDMONTON MILITARY
CW Call: CHR

Frequencies (CW/USB)
3092 4704 5718 6705 9006 11233
13257 15031 17995 18012 23250
Weather Broadcasts (USB)
6753 15035

ST JOHNS (Newfoundland)

Voice Call: ST JOHNS MILITARY
CW Call: CJX

Frequencies (CW/USB)
3092 4704 5718 6705 9006 11233
13257 15031 17995 18012
Weather Broacasts (USB)
6753 15035

Michel also mentions that Canadian Time Signals from station CHU Ottawa can be heard on 3330, 7335 and 14670.

RTTY SYNOPTIC WEATHER BROADCASTS

Bill Blomgren sends us this list: SPEED-100 / SHIFT-850

HALIFAX FLEET WEATHER (CFH)		MIAMI WEATHER (WBR)		
122.5	(0000-2400)	4061.5	3235	
4271	(2200-1000)	8140	8130	
6330	24 hours	13624	10950	All 24 hours
9890	24 hours	18765	14395	
13510	(1000-2200)		16440	

Bill also sends the following list of FAA aviation weather broadcasts (voice).

NEW YORK RADIO		OAKLAND RADIO	
3001	Broadcasts scheduled for	2980	Broadcasts scheduled for
5652	H+00 and H+30	5519	H+05 and H+35
8868		8903	
13272		13344	

SOURCES OF INFORMATION

Ronald Pokatiloff (IL-083) writes: "There is a good magazine at the newstands on cruise ships."

Cruise Travel Magazine
P.O. Box 10139
Des Moines, IA 50340

New subscriptions are $9.97 for six issues. Ronald says, "Many of the boats I hear on shortwave are discussed in the magazine. It has schedules and ports."

Another very interesting publication considering its price (FREE) is the "AMVER Bulletin". It is printed quarterly by the US Coast Guard AMVER Center in New York and is meant for use by merchant ship radio operators. It contains info charts of current propagation conditions, and a list of coastal stations participating in the AMVER program, with their current frequencies being used. It also has very interesting articles about high seas rescues, with a detailed article about the sinking of the M/V Prinsendam in the Jan. 81 issue. For those of you that are not familiar with it, AMVER stands for "Automated Mutual-Assistance Vessel Rescue System". To be placed on the mailing list, write to:

Commander, Atlantic Area (As)
United States Coast Guard
Governor's Island, New York, NY 10004

The Jan. 81 issue is the first one I have received, and I am very pleased with myself for sending for it.

PRODUCTS

Ronald Pokatiloff writes: Radio Shack's "Stereo Disco Mixer" works great for hooking up 2-4 radios and listening to them with mono or stereo phones. All transmissions can be outputted into a recorder. Price is $80.00 and works great.

Ron also sends his observations of his Sony ICF-2001 receiver.

(1) SSB Compensator has moved up in reading. (There is a slight drift until warmup. This was noticed when first purchased).
(2) Volume control is scratchy.
(3) Memory can only be activated by pressing at the left of the button, it works but not good.

In summary, the ICF-2001 suffers from bad switches. Buyer beware. Don't overuse the unit.

INTERCEPTS

Contributor		Primary Rx	RTTY unit
Bill Blomgren	IL-20	Drake SSR-1	Info Tech 75
Mike Chabak	AZ-23	Halicrafters HQ-180	
Chris Devendorf	CA-OK-50	McKay Dymek DR-33	Info Tech M-200E
Fred Osterman	KY-18	Drake R4B	??
Ronald Pokatiloff	IL-83	Sony ICF-2001	
Leonard Stock	CO-25	Yeasu FRG-7000	
Tom Yingling	MD-8	Sony ICF-2001	

Voice

2150	A3H	1-23	1404	USS BAINBRIDGE (CGN-25) wkg LONG BEACH CONTROL	MC
	A3H	1-23	1423	USS KITTY HAWK (CV-63) r/c w/USS HALSEY (CG-23)	MC
	AM	1-24	1352	USS GRIDLEY (CG-21) wkg SAN DIEGO CONTROL 1	MC
2182	USB	12-13	0714	CG GROUP SHINNEROCK, NY wkg vessel SEANIC, Mayday	RP
	USB	12-13	0750	CG GROUP CAPE MAY, NJ clg sinking vessel SEANIC	RP
	USB	1-1	0841	CG COMSTA SAN FRANCISCO, CA wkg S/V CREO, Mayday	RP
	USB	1-10	0755	CG RADIO MIAMI, FL wkg F/V FOXFIRE w/ mayday call	RP
	USB	1-10	0835	CG PORT ISABEL, TX wkg F/V FOXFIRE	RP
2466	USB	12-12	0645	SAN PEDRO MARINE OP, CA w/ telecom tfc	RP
3046	USB	1-21	0050	ANDREWS, MD wkg SAM 12071 (enroute Algeria)	BB
3123	USB	1-1	1024	CG RESCUE 1502 (HC-130) wkg COMSTA SAN FRANCISCO	RP
4066	USB	12-12	0724	USS AMERICA (CV-66) wkg NORFOLK ICSB w/telecom	RP
4369.8	USB	12-25	2350	WAK New Orleans Marine Op w/ telecom tfc	TY
4373	USB	12-12	0738	DELTA ONE wkg ALFA SIERRA (US Navy)	RP
4391.5	USB	1-6	0606	WOM AT&T Miami, FL wkg SKYWARD	RP
4722	USB	12-12	0750	RAF WEST DRAYTON with weather bcst	RP
5400	USB	1-13	1416	WUD6 USACE St Paul, MN clg WUDØ27 Minneapolis	LS
5533	AM	12-25	0400	SHANNON, Ireland, VOLMET weather	TY
5545	A3H	1-17	1305	TOKYO CENTER rollcall w/MISAWA, NAHA, KOMATSU, MATSUYAMA, etc	MC
5690	USB	1-6	0520	LAHR MILITARY (RCAF), FRG weather bcst	RP
5696	USB	1-1	0941	CG RESCUE 1502 (HC-130) wkg COMSTA SAN FRANCISCO	RP
	USB	1-1	0956	CG MIAMI RADIO,FL wkg CG1349 and CG5799	RP
	USB	1-22	0434	CGC FIREBUSH wkg CG16Ø2	MC
5718	USB	1-14	0526	CANADIAN RESCUE 458 wkg VICTORIA RCC	MC
6506.4	USB	1-1	0918	COMSTA SAN FRANCISCO wkg sinking vessel CREO	RP
	USB	1-14	1201	CGC CONFIDENCE wkg COMSTA KODIAK	MC
	USB	1-14	1204	CGC IRONWOOD wkg COMSTA HONOLULU	MC
6518.8	USB	1-28	0120	CGC CAPE GULL wkg MIAMI RADIO	MC
6715	LSB	1-21	1430	ANDREWS, MD wkg SAM 27ØØØ (enroute Germany)	BB
	LSB	1-22	0500	ANDREWS, MD wkg SAM 24127 (returning from Germany)	BB
6716	USB	1-15		VANCOUVER MILITARY, Canada wkg WE47Ø w/ P/p	CD
6748	AM	1-23	0710	SPY STATION - YL SS 5-digit (Final at 0720)	RP
6756	USB	1-22	0500	ANDREWS, MD wkg PAN AM CLIPPER following SAM 27ØØØ	BB
	USB	1-25	1905	ANDREWS, MD wkg SAM 12490	BB
6917	AM	1-29	0815	SPY STATION - YL SS 5-digit (ATT 471 75)	CD
7342	AM	1-29	0800	SPY STATION - YL SS 5-digit (ATT 574 50)	CD
7527	AM	1-29	0900	SPY STATION - YL SS 5-digit (ATT 573 50)	CD
7846	AM	1-29	0800	SPY STATION - YL SS 5-digit (ATT 471 75)	CD
7995	USB	1-29	0803	CGC POLAR STAR wkg MAC RELAY (McMurdo, Antarctica)	CD
8722	USB	12-7	0700	WOM AT&T Miami, FL wkg barge CHALKTAJAU w/medico	RP
	USB	1-6		WOM AT&T Miami, FL wkg AMERIKANIS, STATENDAM, NORDIC PRINCE and SKYWARD	RP
	USB	1-25	0718	WOM AT&T Miami, FL wkg QUEEN ELIZABETH II	RP
8759.2	USB	12-	0529	GEN. PACHECO RADIO, Argentina w/ OM-SS/YL-EE vm	RP
8765.4	USB	12-23	2300	8PO BARBADOS RADIO w/ weather forecast	TY
8765.4	USB	12-23	2300	NMN CG COMSTA PORTSMOUTH, VA w/ high seas wx	TY
	USB	12-23	2345	GKU46 PORTISHEAD RADIO, UK wkg VOYAGER w/ p/p	TY
8799	LSB	12-23	2311	SPY STATION - 5 letter groups	TY
8833	AM	12-23	2310	SHANNON RADIO, Ireland w/ VOLMET Wx	TY

SHORTWAVE UTILITY CONTINUED

8868	AM	12-23	2200	NEW YORK RADIO, NY w/ VOLMET Wx	TY
	AM	12-23	2250	GANDER RADIO, Canada w/ VOLMET Wx	TY
	AM	12-26	0345	GANDER RADIO, Canada w/ VOLMET Wx	TY
8882	A3H	1-15	0323	DAKAR, Senegal wkg IRAQI 706 (Rio to Casablanca flt)	CD
8967	SSB	1-22	0259	ANDREWS, MD wkg SAM 24127	LS
8984	USB	1-15	0133	BORINQUEN AIR, PR wkg CG1350	CD
	USB	1-19	0030	CG 1452 (HC-130) wkg COMSTA SAN FRANCISCO	BB
8997	USB	1-14	0602	MAC CENTER (McMurdo, Antarctica) wkg XD01	MC
	USB	1-14	0604	SIPLE STATION, Antarctica wkg McMurdo	MC
	USB	1-14	0608	XD05 (USN LC-130) wkg MAC CENTER	MC
9007	LSB	1-10	2235	ANDREWS, MD wkg SAM 12671 w/ personal p/p	CD
	LSB	1-20	2300	ANDREWS, MD wkg SAM 12671 w/ p/p to STATE OPS and CARBINE (enroute Algeria to meet hostages)	BB
9014	USB	1-27	0242	RAYMOND 7 (Cannon AFB, NM) wkg CUSHNA 27 & 31	MC
9106	SSB	12-8		HALLEY BASE, Antarctica, patches & tfc to Unid sta	FO
	SSB	12-26	0005	GRYTVIKEN, S. Georgia Is, Antarctica wkg ROTHERA BASE w/ meteo tfc in EE	FO
	SSB	12-26	0003	ROTHERA BASE, Antarctica wkg GRYTVIKEN	FO
10112a	USB	1-22	0030	ANDREWS, MD r/c with SAM 27000 on gnd in Germany	BB
10523.6	USB	1-28	1200	IWO JIMA LORAN wkg SAIPAN MONITOR (USCG)	MC
10780	USB	1-12	1749	AGAR 09 (EC-135) clg CAPE RADIO, FL	LS
11116a	USB	1-23	0420	EUGENE clg BLUE JACK (???) on primary freq	MC
11179	USB	1-25	0029	SAM 12671 (USAF-VIP) wkg HICKAM, Hawaii	MC
11180	LSB	1-20	2300	ANDREWS, MD wkg SAM 27000 (enroute Plains, GA)	BB
11182	USB	1-17	2050	SCOTT, IL wkg MAIN 70 w/ patch to POPE AFB (70 had one engine shut down and declaring emergency)	BB
	USB	1-25	0005	AF RESCUE 95028 wkg SCOTT p/p to EGLIN METRO	MC
11226	LSB	1-14	1840	ANDREWS, MD wkg SAM 27000 and SAM 86972	BB
11249	USB	1-21	1610	SAM 27000 wkg CARBINE	BB
	USB	1-21	1620	ANDREWS, MD wkg SAM 27000 (enroute to Germany)	BB
11488	SSB	1-5	1625	KAG69 Denver, CO wkg KAG78 Kansas City w/ r/c	LS
11553	USB	1-16	0711	CGC POLAR STAR wkg CGC GLACIER & SIPLE STATION	CD
11707.5	USB	1-10	2132	LIMEAID CONTROL wkg LIMEAID 05	CD
13119.4	USB	1-28	2150	VANCOUVER, Canada wkg COAST GUARD SHIP VANCOUVER	CD
13215	LSB	1-14	1840	ANDREWS, MD wkg SAM 27000 and 86972	BB
	LSB	1-20	2300	ANDREWS, MD wkg SAM 12671 p/p to STATE OPS	BB
	LSB	1-25	1630	ANDREWS, MD wkg SAM 86971 (FREEDOM #1) with returning hostages and SAM 86972	BB
13247	USB	1-1	2000	BAREBACK wkg ANDREWS, Maryland	BB
	USB	1-24	2236	NAVY WORLD TRAVELER 50528 wkg ANDREWS, MD	MC
	USB	1-28	2159	SAM 31692 wkg ANDREWS, MD (enroute Colorado Springs)	CD
13251	USB	1-24	2254	LIBERTY LADY (NAS Moffett Fld) wkg AE904	MC
13970	SSB	12-7	0454	UN (Canadian Forces) Golan Heights, Syria	FO
17245.3	USB	1-5	1940	WOO AT&T New York wkg STATENDAM	PP
17263.9	USB	12-25	2330	WCM AT&T Miami, FL with NOAA wx report	TY
17972	USB	1-25	1730	ANDREWS, MD wkg SAM 86971 (FREEDOM 1) and 86972	BB
	USB	1-25	1815	SAM 86972 (at Stewart, NY) wkg FREEDOM 1	BB
18019	USB	1-1	1750	BAREBACK wkg MAC DILL for DATA LINK	BB
18023	LSB	1-17	1940	ANDREWS, MD wkg SAM 24130 p/p to ANDREWS METRO	BB
	LSB	1-17	1950	ANDREWS, MD wkg SAM 12496 (at Key West, FL)	BB
18025	USB	1-21	1430	ANDREWS, MD wkg SAM 27000 (enroute to Germany)	BB
18027	USB	1-22	0030	ANDREWS, MD wkg SAM 27000 (in Germany)	BB
19008	USB	1-6	1545	AIR COOL clg HONORABLE	LS
19502	LSB	12-25	2344	VOA Greenville, NC SS feeder	TY
20198	SSB	1-15	1922	NINE ONE (USAF-Antigua) wkg ONE ECHO (ETR NET)	LS
25578	USB	1-21	1430	ANDREWS, MD wkg SAM 27000 (enroute Germany)	BB

Morse

207	MCW	1-16	0439	"YNE" beacon - Norway House, Man.	LS
215	MCW	1-17	0215	"BFK" beacon - Buffalo, OK	LS
227	MCW	12-25	0340	"MPR" beacon - McPherson, KS	LS
266	MCW	1-4	0229	"BY" beacon - Beechy, Sask. (under MAD)	LS
305	MCW	1-3	0326	"RO" beacon - Roswell, NM (under PO)	LS

311	MCW	12-30	0425	"BFE" beacon - Brownfield, TX (under PO)	LS
	MCW	1-3	0303	"OY" beacon - Pincher Creek, Alb. (under PIL)	LS
317	MCW	1-6	0235	"MMM" beacon - Miami, OK (under FTT)	LS
341	MCW	1-2	0459	"ALM" beacon - Almagordo, NM (under GIG)	LS
6792a	CW	1-17	1440	"B" beacon (2 second repeat cycle)	MC
6800a	CW	1-22	0617	"D" and "C" beacons (each in 1 sec. repeats)	MC
7527	MCW	1-28	0000	SPY STATION - 5 letter groups (RDT RM)	CD
9647a	CW	1-28	0702	"K" beacon	CD
9656a	CW	1-22	0605	"C" "D" and "K" beacons (all mixing together)	MC
10037	CW	1-22	0540	KKN5Ø US State Dept Washington, DC w/ QRA mkr	MC

RTTY

9157	/	12-25	2247	4QN United Nationas Jerusalem, Israel, tfc	FO
9846	66/425R	1-13	0442	TUH ASECNA Abidjan, Ivory Coast, testing	CD
9884a	100/850R	1-21	0350	CFH HALIFAX MILITARY, Canada w/ wx bcst	BB
14573	66/425R	11-16	1653	Jamahiriyah Press Agency, Malta, AA press	FO
15030	66/425	12-8	0310	RUZU Molodeznaya, Antarctica, RY test	FO
15045	66/425R	12-8	0411	VLV MAWSON BASE, Antarctica w/ ID test	FO
15955	66/850	12-7	0355	PORT LOUIS METEO, Mauritius, meteo & ID	FO

ATTENTION CANADIAN MEMBERS: I would appreciate hearing from you if you have details of systems in use in Canada. Domestic government comms such as long-range RCMP circuits, natural resources, telephone links, etc. Does anyone have any information about Canadian Coast Guard comms? Please send along any HF information you can to share with the other Utility listeners. This also goes for you other members outside of the USA, I would like to hear from you too.

contact/info wanted

This column has two purposes: to help members contact each other, and to help members obtain information directly from one another on various subjects related to 2-way communications monitoring. If you desire to converse, meet, or correspond with other members by telephone, letter, or cassette tape in a certain geographic area or with members who have similar listening interests, this is the perfect place for you to make your desires known. Remember --- those who respond will do so directly, so be sure to provide your phone number, the best time to be called, or your address.

Write to: John W. Darr, P.O. Box 1652, Cheyenne, WY 82001

NOAA WX RADIO LIST: Available to all RCMA members is a complete listing of all NOAA weather radio stations in the country. Includes call letters, frequencies, and power in watts. Over 6 pages; valuable information which is a must for any monitoring station. Please send $1 to cover cost of reproduction and postage. [12-10-80]

LOUIS CAMPAGNA (PA-Ø24), 9724 Bridle Road, Philadelphia, PA 19115

MICROFICHE DATA WANTED: St Louis Chapter, RCMA, is looking for frequency information, license data, etc., on Microfiche. If you have such data, obsolete or not, that you no longer want or need, send it -- or sell it -- to the St Louis Chapter. [12-28-80]

MIKE REDMAN (MO-ØØ2), P O Box 1177, St Charles, MO 63301

PLATTSBURGH NEW YORK INFO: Member planning a long weekend visit needs frequencies for all services for Plattsburgh, NY -- including local PD, FD, prison, and Air Force Base. [12-31-80]

RICKEY STEIN (NJ-ØØ1), 456 Barrymore Place, North Brunswick, NJ 08902

SEATTLE INFO: Member requests fire and police frequencies, codes, and unit numbering systems for the Seattle, WA, area. Will gladly trade for Boston, MA, area frequencies. [1-15-81]
MARK WOLFGANG (MA-Ø45), 63 Campbell Ave., Revere, MA 02151

WESTERN GOV'T FREQS: New member -- and a Forester with the U. S. Forest Service -- wishes to obtain the following types of frequencies, and information, for the western states: U. S. Forest Service, State Game & Fish Agencies, State Forestry Agencies, U. S. Fish & Wildlife Service, U. S. Bureau of Land Management, State Parks, and the National Park Service. [1-18-81]
FRED RICHTER (NM-ØØ5), Box 407, Magdalena, NM 87825

OLD ZENITH TRANS-OCEANIC SCHEMATIC: Member is seeking schematic diagram for 1943 vintage Zenith Trans-Oceanic Shortwave radio. The model number is RG605. If you can help, please write! [1-21-81]
TERRY MILICZKY (IN-ØØ3), 2505 Shady Oak Drive, Ft Wayne, IN 46806

S.E. MASS-VT-NH-RI FEDERAL FREQS AND INFO: Member wants to contact other members in S.E. MA, RI, VT and Northern NH in order to exchange/discuss information on federal frequencies in their areas. [1-21-81]
ED SOOMRE (MA-Ø17), One Alcott Drive, Northboro, MA 01532

2-METER FM AMATEUR LIST: Member is compiling a list of 2M amateur repeaters for New England; has 95% of the frequencies and areas served by these repeaters. He wants to contact other members for specific information i.e., exact repeater locations, such as mountains, hills, or high building repeater locations. [1-21-81]
ED SOOMRE (MA-Ø17), One Alcott Drive, Northboro, MA 01532

BACK ISSUES OF RCMA NEWSLETTERS: Los Angeles County member wishes to borrow RCMA Newsletters dated prior to August 1977 for copying. Will reimburse for postage expenses. [1-25-81]
GARY M DARCY (CA-LA-Ø59), P O Box 1329, Palmdale, CA 93550

ANTELOPE VALLEY FREQS: Member wishes information on frequencies for the High Desert areas of Los Angeles and Kern Counties, California. Particularly interested in frequencies belonging to other than public service agencies. [1-25-81]
GARY M DARCY (CA-LA-Ø59), P O Box 1329, Palmdale, CA 93550

FOUND! Frequency directory left at a recent RCMA Delaware Valley Chapter meeting. Identify the directory and we'll work out a return. [1-26-81]
CHUCK GYSI (PA-ØØ5), (215) 657-5324

CENTRAL JERSEY NUMBERING SYSTEMS AND CODES: Member moving to Central Jersey needs police, fire and rescue unit numbering systems and codes for the following counties in New Jersey: Somerset, Middlesex, Morris, Union, Warren, Ocean, Monmouth, Essex, Cape May, and Atlantic. Also need lists for Carbon and Monroe Counties in Pennsylvania and radio codes for Trenton and Ocean City, NJ, police departments. Can exchange for information anywhere else in southeast PA or South Jersey. [1-26-81]
CHUCK GYSI (PA-ØØ5), P O Box 216, Willow Grove, PA 19090

BIRMINGHAM CHOPPER FREQS, ALABAMA 10-CODES: New member looking for frequencies used by Caraway Met. Medical Center helicopter in Birmingham, AL. Also needs 10-codes used by Alabama State Police. He has 10-codes for Birmingham PD, Hank's Ambulance and A & A Ambulance. [1-27-81]
SCOTT CARR (AL-Ø15), P O Box 1485, Birmingham, AL 35201

PALM BEACH S.O. LIST SWAP? Will trade list of Palm Beach County (FL) Sheriff's Office dispatch and 10-code list for your area list. [1-28-81]
BILL GODBEY (FL-ØØ9), 5683 Souchak Dr, W Palm Beach, FL 33406 // (305) 686-8548

INAUGURAL SECURITY TAPES: Member wishes to obtain casette tape of Presidential security radio traffic during the Inauguration in Washington, DC. Can pay for a copy of the tape and/or trade his tapes. [1-28-81]
WAYNE AMOS (VA-Ø21), 55 Claypit Hill Rd, Wayland, MA 01778

CHICAGO MEDIA FREQS: Chicago-area member requests frequencies for media in Chicago area. [1-31-81]
JOHN COSENZA (IL-155), 7501 W 58th St, Summit, IL 60501 // (312) 458-2677

SAN FRANCISCO AREA RCMA CHAPTER? A new member -- but a listener for over 10 years -- would like to contact other members in the Bay Area who might be interested in forming an RCMA chapter. [2-1-81]
CLIFF POLKINGHORN (CA-???), 14310 Acacia St, San Leandro, CA 94579

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Interested in Wyoming Highway Department Road and Weather Conditions? Then you should have the following list of codes. Reports for the entire state are usually to be heard each morning at 7 a.m. on 155.445 MHz and at other times on a random basis.

Wyoming Road and Weather Condition Codes

	Road		Weather
8-1	Dry	9-1	Favorable
8-2	Wet	9-2	Snowing
8-3	Slick	9-3	Raining
8-4	Slick in spots	9-4	Strong wind
8-5	Drifted snow	9-5	Fog
8-6	Closed	9-6	Blowing snow
		9-7	Limited visibility
		9-8	No report

During much of the year, summer or winter, we have a lot of "9-4!"

FEDERAL GOV'T and ★ MILITARY ★

Robert B. Grove, Editor

Send all Federal Government and Military frequencies (including those of military aifcraft), radio system details, and related questions to: Robert B. Grove, Route 1–Box 156, Brasstown, NC 28902. Sensitive frequencies will not be published. Coast Guard material must go to the VHF Marine editor.

Those secret frequencies

Letters pro and con still arrive concerning the issue "to publish or not to publish" sensitive frequencies. Thomas (DE-009) reflects that it is merely a question of reading between the lines--take a comprehensive unclassified list (Federal Frequency Directory) and see what has been left out. I did this recently, and found that it would be possible to determine a large number of classified frequencies by merely following the band plan and seeing what was skipped in the Directory. Incidentally, most of what is skipped is Department of Justice (FBI, US Marshals and Border Patrol) and Treasury (Secret Service, Customs, ATF and IRS).

Super-secret clandestine agencies (CIA,NSA, etc.) constitute a very minor portion of the assignments. Often covert operations use cover frequencies in the business band for their fronts.

The Canadian BC-220C This month Rene(CA-SC-018) has offered to share with us his impressions of the Canadian export BC-220C. In the interim,

I, too was favored with a hands-on evaluation of a BC-220C. Because of the temptation to smuggle these scanners across the border to Canada, an exclusive sales agreement with the Canadian importer has virtually excluded the possibility of acquiring one of these units domestically.

The primary difference between the American BC-220 and its Canadian counterpart is in the Canadian's frequency coverage: 30-50, 118-136, 138-170 and 406-490 MHz. Obviously, the Canadian version is very desirable to listeners of U.S. federal government communications.

Rene and I both agree that other than that, the BC-220C is identical in operation and specifications to its American counterpart, the BC-220 which has been reviewed previously in this magazine.

Rene mentions a couple of observations which deserve to be passed along. All Bearcat scanners which include the aircraft band may have image interference from high band FM stations 21.6 MHz higher. For instance, a strong 152.54 MHz mobile telephone carrier may be heard on 130.94 MHz. This is a turnabout for the usual FM high band interference from AM aircraft stations!

Rene offers another hint: If you are encountering Interference on your favorite UHF channel, simply program a frequency 21.6 MHz higher and listen to its image! Not a bad idea in areas where both 460 and 480 MHz police and fire services are in operation.

Some images and spurious signals may be defeated by programming your scanner 5 kHz above or below the actual center channel.

Thanks, Rene, for several good tips.

24 hour digital watch: Bob (CAN-051) has brought to our attention a commercial 12/24 hour LCD wristwatch with alarm that should appeal to military buffs as well as shortwave listeners. The "Conic" features calendar, stopwatch, alarm, choice of 12 or 24 hour readout, quartz accuracy, solar recharging, backlighting for night viewing and a stainless steel case.

For more information including cost (well under $100) contact CANA Traders Ltd., 178 East Pender St., Vancouver, BC, Canada V6A 1T5. Telephone 604-688-7421. Thanks for the suggestion, Bob.

Jacques Cousteau's Calypso communications Everyone's favorite undersea explorer has switched satellits from ATS-3 to Marisat. And he's not alone. A recent announcement by Hughes Aircraft, prime contractor for the big bird, says that more than 300 terminals are now in shipboard use worldwide, all utilizing Marisat.

HAMS! Ready for the MONITOR NET? After several years of casual discussion, it would appear that we are ready for an on-the-air HF net for listening hobbyists. Interested hams should write to me directly with suggested times and frequencies. Keep propagation in mind for nationwide check-ins. I will volunteer as initial NCS until we get under way.

Because of the two months lag between writing this column and seeing it read, we will probably get started some time in April or May, depending upon reader response.

. . . . .And now for this months contributions.

From STEPHEN (CA-KE-008) Inyo National Forest

168.125 F-1 simplex and F-2 repeater output (168.725 input)
168.200 F-3 simplex Region 5 Fire Common
170.525 F-4 simplex service net/radiotelephone link
168.625 Nationwide Air Dispatch (168.025 input. . .ed.)

Stephen also has call signs, unit designators and station/repeater locations for an SASE in case anyone would care for them. Thanks, Stephen!

From RANDAL (OH-083) Cuyahoga Valley National Park KLP731 (borders Cleveland, OH)

166.375 Repeater output (166.975 input)
477.5125 Simplex
477.5375 Simplex

Randal advises that rangers use the standard APCO ten code. Thanks, Randal!

From TERRY (OH-036) Clark County, Ohio
163.4375 US Army Corps of Engineers WAU885, channel 1 (base/mobile)
173.4375 USAF Wright Patterson AFB police, channel 1 (base/mobile)
173.5375 USAF Wright Patterson AFB squad, channel 1 (base/mobile)
173.5625 USAF Wright Patterson AFB fire, shannel 1 (repeater)
163.5125 USAF Wright Patterson AFB maintenance, channel 1 (base/mobile)
148.150 USAF Civil Air Patrol repeater output (143.900 input. . ed.)
164.985 USPS channel 1 (base/mobile)
164.175 VA Hospital paging, channel 1 (base)
164.700 VA Hospital maintenance, channel 2 (base/mobile)
169.600 VA Hospital security, channel 1 (base/ mobile)

Nice list, Terry. . .Thanks for sharing!

Recently, Robert Wyman of the Miami Group visited an open house at Homestead Air Force Base and jotted down a number of frequencies displayed on aircraft. His observations and comments appear here.

C-130 Aircraft.

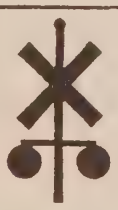
ch. 1 154.920 Florida Highway Patrol car-to-car
ch. 2 155.280 Central Florida Medical Net
ch. 3 155.340 Common hospital net
ch. 4 156.300 Maritime channel 6 (intership safety)
ch. 5 156.650 Maritime channel 13 (navigational)
ch. 6 162.400 NOAA weather broadcast
ch. 7 162.550 NOAA weather broadcast
ch. 8 164.050 (FAA San Juan, PR. . .ed.)
ch. 9 168.625 US Forest Service
ch.10 168.500 (Interior nationwide. . .ed.)
ch.11 172.600 Common Air Safety (Interior nationwide. . .ed.)
G1 156.800 Maritime ch. 16 (International distress)
G2 153.800 SW Florida local government common

Other channels operational on base

31.600 Florida Army National Guard (tuned in on jeep)
46.100 Aircraft (possible fire department intercommunications. .ed.)
66.900 Thunderbirds portable radio (!. . ed.)
114.950 Thunderbirds mobile radio (!!. . ed.)
123.800 Homestead AFB Ground Control Approach
124.700 Homestead AFB ARTCC
124.930 Thunderbirds mobile radio (they sure pick their own slots, don't they?. . ed.)
126.200 Homestead AFB tower (Military/FAA common. . ed.)
140.000 Thunderbirds hand-held portables
165.370 Aircraft (hmmmm!. . .ed.)
295.700 Homestead AFB tower
319.900 Miami Approach/ Departure Control
381.300 Homestead AFB Tactical Command Post

Fascinating list, Robert. Anyone else out there have some kinky stuff?? How about sharing your more prominent catches?

Thanks, all, for this month's contributions. I know we'll have more of yours next month. See you then!



Railroads

Ken Fitzgerald, Editor

Send information about railroad frequencies and their uses, radio system details, tips for monitoring railroads, explanations of railroad jargon and related information and questions to: Ken Fitzgerald, 121 East Hackberry, Enid, OK 73701.

NO READER INPUT RECEIVED FOR THIS ISSUE.

Marketplace

Gray M. Darcy
Column Editor

Members may advertise, free of charge, items wanted, items for sale, and items for trade that are associated with the hobby of monitor/utility radio listening. No dealer ads will be accepted for this column. RCMA assumes no responsibility for the outcome of any transactions between members resulting from ads printed in this column. Send to: RCMA MARKETPLACE, c/o Gary M. Darcy, P.O. Box 1329, Palmdale, CA 93550. Please be sure to include your membership number.

FOR SALE: Sears 10 channel crystal scanner. AC-DC w/2 power cords, mobile bracket, 2 plug-in antennas, and manual. Has scan delay and lock-out for each channel. Used for 2 years, but in excellent condition. Uses Regency type crystals. $ 75.00. Contact: LEWIS S. HARVEY (GA-008), 415 E. Hall St., Savannah, GA 31401. *

FOR SALE: Regency type crystals for the following frequencies: 31.10 / 42.02 / 48.18 / 152.03 / 152.63 / 153.59 / 154.085 / 154.19 / 154.31 / 154.34 / 154.74 / 154.68 / 154.80 / 154.905 / 154.935 / 155.055 / 155.13 / 155.16 / 155.22 / 155.34 / 155.94 / 157.05 / 157.075 / 163.53 / 165.235 / 167.635 / 460.025 / 460.20 / 460.325 / 460.40 / 460.475 / 463.0 / 468.0. $ 1.00 each. Contact: LEWIS S. HARVEY (GA-008), 415 E. Hall St., Savannah, GA 31401. *

FOR SALE: Bearcat crystals for the following frequencies: 45.28 / 154.31 / 154.905 / 154.74 / 155.13 / 155.22 / 155.34 / 156.03 / 156.425 / 156.90 / 157.05 / 157.075 / 162.40. $ 1.00 each. Contact: LEWIS S. HARVEY (GA-008), 415 E. Hall St., Savannah, GA 31401. *

FOR SALE: Bearcat Model SPU hand-held scanner. 4 channel UHF w/assorted crystals. $ 50.00 postpaid. Contact: BRUCE PORTZER (WA-016), 6546 19 Ave. N.E., Seattle, WA 98115 or phone 206-522-2521. *

FOR SALE: Sears VHF-UHF programmable scanner. 16 channels, base or mobile, 7 cards included. Will ship. $ 130.00. Contact: BILL MULLOWNEY (MA-029), 62 Woodlawn St., Everett, MA 02149.

FOR SALE: Regency VHF Hi-Lo TMR8 8 channel scanner. Base or mobile. Will ship. $ 30.00. Contact: BILL MULLOWNEY (MA-029), 62 Woodlawn St., Everett, MA 02149 *

FOR SALE: Realistic DX-160 Communications Receiver w/speaker. Will ship. $ 130.00. Contact: BILL MULLOWNEY (MA029), 62 Woodlawn St., Everett, MA 02149. *

FOR SALE OR TRADE: Bearcat 210. Excellent condition. Minus mobile power cord and mounting bracket. Will sell for $ 200.00 or trade for a Bearcat 4-6 hand-held unit. Contact: RICHARD AVERY (CA-AL-020), 333 S. 3rd E., Rexburg, ID 83440 or phone 208-356-8447. *

FOR SALE: Regency K-500 scanner. Only a few months old and very little use. $ 275.00 or best offer. Contact: JIM BROADBENT (MA-024), 78 Squanto Rd., North Weymouth, MA 02191 or phone 617-337-5831. *

FOR SALE: Regency Flite Scan w/NY crystals. Best offer. Contact: AL GREENMAN (NY-032), 2150 - 72 St., Brooklyn, NY 11204 or phone 212-256-4629 or 256-9045. *

WANTED: A UHF (450-470 mhz) scanning receiver w/at least 4 channels, similar to the Regency ACT-C4 HLU, ACT-C4U, or TMR 8U. Prefer Regency, but may consider a Sonar scanner receiver. An excellent UHF receiver is a must. Contact: MIKE REDMAN (MO-002), P.O. Box 1177, St. Charles, MO 63301. *

FOR SALE: Bearcat BC-300. New condition and perfect. Original carton. $ 325.00 shipped. Contact: BOB GROVE (NC-006), Rt. 1 Box 240, Brasstown, NC 28902.

FOR SALE: Eddystone 770-U 145-512 mhz AM/FM laboratory receiver. High sensitivity. Like new condition. $ 325.00 shipped. Contact: BOB GROVE (NC-006), Rt. 1 Box 240, Brasstown, NC 28902.

FOR SALE: Palomar Engineers loop amplifier and loop antennas for 2-15 mhz. New condition. $ 85.00 shipped. Contact: BOB GROVE (NC-006), Rt. 1 Box 240, Brasstown, NC 28902.

FOR SALE: Tennelec Memoryscan MS-1. Brand new w/accessories and code book. Asking $ 175.00 to include UPS shipping. Contact: BILL HALPIN (CA-SB-024), 3 Stratolifter Ct., Norton AFB, CA 92409.

FOR SALE: Regency Digital Flight Scan. 2 years old, still like new. $ 200.00. Please call first. Contact: TOM PAMIN (PA-003), 3151 W. 25th St., Erie, PA 16506 phone 814-833-5729.

FOR SALE: Bearcat 4-6. Includes rubber ducky and carrying case. $ 100.00 includes shipping. Contact: JEFFERY HOOPER (GA-027), Rt. 3 Box 91, Blairsville, GA 30512 or phone 404-745-2504 after 5:00 pm.

FOR SALE: Regency K-100. Very good condition; works perfectly. Under warranty. $ 225.00. Contact: JOHN LAND (IN-039), R.R. 7 Box 210, Greenfield, IN 46140 or phone 317-894-3289 (no collect calls, please).

FOR SALE: Regency 4 channel hand-held scanner w/crystals for: 155.01 / 155.37 / 155.565 / 155.64. Just returned from factory, but still does not work properly. Good for someone with a little electrical knowledge. $ 20.00. Contact: AL BATT (MN-009), Box 37, Hartland, MN 56042 or phone 507-845-2836.

FOR SALE: Collins AS-1405 directional antenna. 200-400 mhz. Adjustable sections. Like new; in case. $ 60.00. Contact: MICHAEL P. MURPHY (CA-SD-033), 738 Laguna St., El Cajon, CA 92020 or phone 714-442-7049.

FOR SALE: Collins AS-1404 omnidirectional antenna. 200-400 mhz. Good condition. $ 20.00. Contact: MICHAEL P. MURPHY (CA-SD-033), 738 Laguna St., El Cajon, CA 92020 or phone 714-442-7049.

FOR SALE: R-442A/URC Receiver. 30-75.95 mhz. Digital tuned (mechanical). FM - signal or tone activated squelch. Operates on 24-28 Volts DC @ 2 amps. $ 175.00. Contact: MICHAEL P. MURPHY (CA-SD-033), 738 Laguna St., El Cajon, CA 92020 or phone 714-442-7049.

**EDITORS COMMENT: In addition to the items listed above, Michael also has a transceiver covering 30-75.95 mhz for sale and lots of other surplus items that he wishes to sell or trade. If you send him a SASE he will send you a list. Send to: MICHAEL P. MURPHY (CA-SD-033), 738 Laguna St., El Cajon, CA 92020.

FOR SALE: Panasonic RF-2800 shortwave utility receiver. Digital readout, BFO, RF gain, etc.. Like new, in original box w/warranty card. $ 200.00. Will ship U.P.S. Insured. Contact: JOHN GUNDERSEN (MN-014), 1246 University Ave., St. Paul, MN 55104.

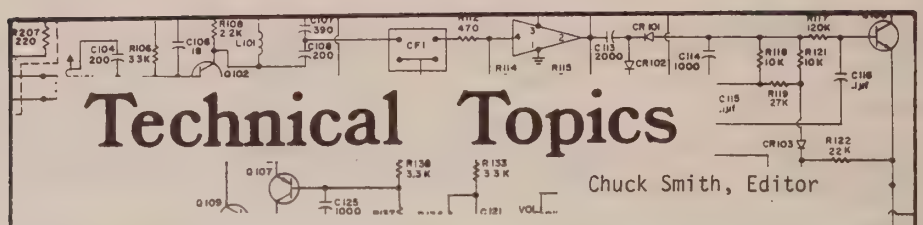
FOR SALE: Heathkit Model GR-1132 scanner w/8 crystals. $ 80.00. Contact: JOHN WILEY (IL-170), 421 W. Bryn Mawr, Roselle, IL 60172.

FOR SALE: Realistic Pro-7B 8 channel, crystal controlled scanner. In original packing carton with manual and mobile mounting bracket. Still in very good condition. $ 80.00 + U.P.S. shipping costs. Contact: ERIC VINCENT (CA-LA-216), 720 W. 27th St. #233, Los Angeles, CA 90007.

MONITORING & THE LAW

Editor Needed!

We need a new Monitoring and the Law column editor. This person should have some familiarity with monitoring laws and it would be desireable if he/she had a collection of them from around the nation. This editor would be required to generate some information for the column as well as organize input from the general membership. If you are interested, please TYPE a letter telling about yourself and qualifications to: RCMA Managing Editor, P.O. Box 216, Willow Grove, PA 19090.



Technical Topics

Chuck Smith, Editor

Send all equipment reviews, technical articles, technical tips, and questions on such subjects as receivers, antennas, preamps, accessory equipment, repeaters, links, tones, scramblers, non-voice data transmissions, or even computer applications for monitoring to: Chuck Smith, 4901 Heil Avenue, No. 3C, Huntington Beach, CA 92649.

Hello again, and welcome to the April, 1981 issue of the RCMA Newsletter. I must admit I feel a little strange writing a column which will appear in Spring when outside right now it is gray, cold, and drizzling rain. Perhaps one of these days I'll get used to being over two months behind the times (or is it ahead of the times) but for the time being I find it most confusing indeed.

Things have been a little slow from you readers out there. At the rate the Club and the Newsletter have been growing, there must be some members that have some type of technical question, or more likely, some older veteran member that didn't understand my confusing explanation of some question that was already asked. At any rate, with the recent absence of mail coming in, the spiders that inhabit my mailbox have grown larger and bolder, and I'm afraid that if someone doesn't start writing in soon, they're going to get awfully hard to handle. For the past few years the Newsletter has enjoyed a tremendous growth rate...to the point where our printer has been suggesting that it would almost be as cheap for us to be published as a real, honest-to-goodness magazine...but if the editors have to keep making up all of their own material this rate of growth won't last for long. After all, as much as I love to do it, this Newsletter is printed for the benefit and enjoyment of all 2,000 plus members, and not merely as a forum for those of us who are privileged to be column editors. So in other words, let's get off your tails and write a few letters and questions, unless you honestly like reading my column when I rant and rave on my own, which I seriously doubt!

IS THIS THE END OF THE LINE??

This provocative heading is not meant to ask whether or not we are facing the imminent arrival of the Apocolypse, or the demise of the RCMA; what I am asking is whether or not we have arrived at a plateau in the state-of-the-art relative to monitor receivers. For a brief time it seemed that new products appeared on the market so fast that one was hard pressed to keep up with all of the new models, and admittedly some of those new products might just as well have stayed on the drawing board, but lately this trend seems to have abated somewhat. I was not personally able to attend this winter's Consumer Electronics Show in Las Vegas, but I know several individuals who did, and none of them came back marveling at all of the new introductions in the scanner field. If there were any, I would very much appreciate it if one or more of those attendees would drop me a line and give me the run-down on what they saw.

To keep up with my many and varying interests I subscribe to quite a number of technical and trade publications, and most of these devoted a large chuck of column space to the reports brought back from their envoy to the winter CES. I read pages and pages of enthusiastic reports about the new introductions in audio equipment, home video games and computers, and of course the new darling of the electronics industry, the video tape recorders and the video disc players. But in no publication did I read a single word about new developments in scanners or scanner-related acces-

sories. Now that means either no one thought it was important enough to write about, or more likely, there just weren't any new developments to see in the first place.

After all, how far can we expect Bearcat, Regency, or whoever to go to improve upon a product line which is, after all, just a radio receiver? Those of you who have been unfortunate enough to have read my column over the years know that there is no one more opposed than I to all of the unnecessary bells and whistles that have been added to the scanners ever since the first synthesized models were introduced some time ago. But does this mean that no more money is being spent by these manufacturers to improve the basic performance of these radios? I guess this really depends to a great extent on you, the radio buying public, and how much you're going to be willing to pay for these improvements. All of the scanner making powers have at their disposal enough engineering talent to design and manufacture just about anything that you would be willing to buy. Did you pick up on that last phrase: "willing to buy"? In case you weren't aware of it, it does cost quite a bit of money to design, construct, test, modify, and then finally produce a new product, and that goes for everything from scanners right on down to toilet tissue. These dollars have to come from somewhere, and you can't blame the manufacturers for eventually wanting to get them back, now can you? That is supposedly the way things are supposed to work in our capitalistic society, and I personally agree with that hypothesis 100%.

So before any company is going to spend money, and I mean over a million dollars in some cases, to develop and market a new and improved product, we have to show them in some way that we are willing to pay the freight for those improvements. In this life you get what you pay for, and what you get for free under those circumstances is going to be a big fat zero, and don't blame the manufacturers for that. The marketing gurus at Bearcat and Regency have their own ways of figuring out what the public wants and therefore would be willing to pay for, but they're not always on target, and that makes any new product a real gamble for those who are investing the money for it. So why don't we give them a hand in making these decisions? Why don't you write to Regency or Bearcat or whoever is making your favorite brand of scanner these days, and tell them what's on your mind? Tell them what you like about their product, what you don't like, and some of the features that you'd like to see included in future models. Believe me, they will listen; after all, you've already invested in one of their products, and a company can only sell so many scanners before they start getting repeat customers. Given a chance, I think they will be most responsive to your suggestions, since without you they would probably be out doing something else for a living. Heaven knows, I've been on the attack after the manufacturers long enough; I think it's time I gave them a little plug for a change!!

MODULATION TOPICS

For the first couple of years after the RCMA was formed, it was an organization that dealt exlusively with reception of public service transmissions in the VHF and UHF portions of the electromagnetic spectrum. As such, there really was only one type of modulation being used by the vast majority of stations in this area, and this was FM. The one notable exception to this, of course, is the VHF aircraft band where the transmissions were made using AM. But now the RCMA has embraced the utility stations which populate the high-frequency (HF) spectrum, and along with them the other types of modulation modes used by these stations. I hope with this article to explain a little bit about these different types of modulation and how they work the way they do.

FREQUENCY MODULATION (FM)

Naturally, the first and most familiar of these types of modulation is frequency modulation, more commonly known as FM. Now even before I get down to the subject of FM itself, perhaps I should explain that the pro-

cess of modulation, regardless of what kind it is, is the method used to superimpose intelligence on the carrier wave and thus transmit it to some distant location. Now this intelligence may be in the form of the human voice, or Morse code, or radio teletype, or even pictures, but in order to transmit that intelligence from one end of the circuit to another we first must find a way to change, or "modulate" the carrier wave with it.

Frequency modulation means that we will alter the frequency of the carrier wave in proportion to the amplitude of the human voice of whatever type of intelligence we chose to transmit. In other words, the louder the voice, the greater the frequency change of the carrier wave will be. The higher the frequency of the voice signal, the faster the carrier wave will change in frequency back and forth between the two values.

To illustrate, let's imagine a carrier wave at a frequency of 100.000 Megahertz. When no modulating signal is being applied, the carrier wave will remain unchanged at 100.000 Megahertz. Now let us apply a tone to modulate the carrier wave, and let the tone be at a frequency of 1000 Hertz and at such a level so as to modulate the carrier wave to its allowable maximum of plus and minus 5 kilohertz (this being for narrow-band FM). The carrier wave, when modulated by such a tone, will swing back and forth between 100.005 MHz and 99.995 MHz at a rate of 1000 HZ. If we then were to change the frequency of the tone to 2000 HZ, the carrier wave would still alternate between 99.995 and 100.005 MHz, but now it would do this at the new rate of 2000 HZ. If we reduce the amplitude of the modulating tone to one half its original amplitude, then the carrier wave would only swing back and forth between 99.9975 and 100.0025 MHz, half as much as before. This example should serve to show that the amount that the carrier will swing, or deviate, from the center frequency is determined by the amplitude of the modulating signal, and that the rate of change will be determined by the frequency of the modulating signal. Therefore, it can be seen that the bandwidth which will be occupied by the signal is proportional to the maximum amplitude of the signal, and will have very little to do with the modulating frequency. In practice, this is not absolutely true, but for the purposes of this discussion we shall imagine that it is.

At the receiving end we must therefore devise a method by which we detect these frequency changes in the carrier wave and translate them back into the original amplitude variations. This is accomplished by the FM detector, commonly known as a dicriminator. The discriminator utilizes a tuned circuit, which when presented with a signal exactly on the carrier frequency, will give no output, but as soon as the frequency of the carrier wave begins to change, the discriminator will give us an output which is proportional to that change, thus giving us back the original modulating waveform. Since the discriminator need not respond to amplitude variations at its input, it is preceded by a limiter, which is an amplifier used to remove all of the amplitude variations in the signal prior to detection, and this is what gives frequency modulation the resistance to static interference for which it is so well known.

There is a modified version of frequency modulation known as "phase" modulation, which achieves modulation by varying the instantaneous phase of the carrier wave relative to that phase which is obtained from an unmodulated carrier. Since doing this is the same process as varying the instantaneous frequency of the carrier wave, frequency modulation results, and is detected in exactly the same way as true FM. Phase modulation is a less expensive process, however, and in most two-way radio equipment, is the actual method used to obtain frequency modulation. This is probably because it is much easier to design a phase shifting network for a highly stable carrier oscillator than it is to design an oscillator that can be relaiably altered in frequency and still remain stable when unmodulated over all possible extremes of voltage and temperature.

The familiar "center-zero" tuning meters on stereo equipment and ham radio gear designed to receive FM transmissions is simply a meter which is connected to as to monitor the average DC output of the discriminator. Since the output of the discriminator should be zero when the receiver is tuned exactly on frequency, the tuning dial is simply adjusted until the meter reads zero. Tuning slightly lower or higher in frequency will then

result in a negative or positive output from the discriminator and a resultant deflection of the meter. The meter is fed with a filtered output from the discriminator so that it will not deflect when the carrier wave is subsequently modulated. It is desirable to tune these stations as closely as possible to their exact frequencies so that the output of the discriminator will contain the least possible distortion.

AMPLITUDE MODULATION (AM)

In opposition to the methods used by FM as previously outlined, an AM transmitter uses the modulating waveform to amplitude modulate the carrier wave. Modulation will then result in both an increase and descrease in the instantaneous amplitude of the carrier wave with modulation, as opposed to FM where the amplitude of the carrier wave will remain constant. If we take the same example that we used for the FM problem, and amplitude modulate the 100.000 MHz carrier wave with a 1000 HZ tone, we will end up with a carrier wave at 100.000 MHz and two sidebands caused by the modulating process, one (the lower sideband) at 99.999 MHz and the other (the upper sideband) at 100.001 MHz. Please notice that the frequency of the sidebands and their placement relative to the carrier wave is proportion to the modulating frequency, not the amplitude of the modulating frequency. If the amplitude of the modulation is increased, the instantaneous amplitude will be increased (upward modulation) and decreased (downward modulation) until at some point the downward modulation will cause the carrier wave to be completely reduced to zero. This is the point of 100% modulation, and any attempt to increase the modulating voltage further will result in severe distortion of the signal and resulting "splatter", which could interfere with communications on adjacent channels. If we increase the modulating frequency from 1000 HZ to 2000 HZ, the upper and lower sidebands will appear at 100.002 and 99.998 MHz, respectively. It is important to note that the distance between the carrier wave and each of the sidebands is equal to the modulating frequency, and that the total bandwidth occupied by the signal is thus equal to twice the modulating frequency. The amplitude modulating process will leave us with a carrier wave the envelope of which will be at the modulating frequency due to the superimposed amplitude variations.

At the receiving end, the reception of an amplitude modulated signal is much simpler than that of receiving FM signals. In order to recover the original intelligence, it is merely necessary to rectify the incoming RF signal and then filter it. Rectification simply strips off the portion of the waveform below zero (which is not needed for detection) and the filtering then removes the residual amount of carrier wave which remains, and leaves us with the original modulating waveform. While this method is a simple one, any amplitude variations on the incoming signal caused by static and the like will also be detected and reproduced in the output waveform, thus causing interference.

Looking over the accompanying illustrations should serve to help explain the differences between these two types of modulation and the methods for recovering the original modulating intelligence. It should be noted after some study that the amplitude modulation scheme is very wasteful, both of power and spectrum space. After all, the upper and lower sideband are simply mirror images of one another, and only one of them is needed for faithful detection. Also, the carrier wave itself is only needed at the receiving end to serve to demodulate the sidebands, and in effect is only going along "for the ride". If we could figure out a way to remove the carrier and then reinsert it at the receiving end, we could thus avoid the wasteful process of transmitting it and therefore make our transmitter much more effective for the same power output level. Next month, this is exactly what we will do when we discuss SINGLE SIDEBAND. Until then, best wishes and good listening.....

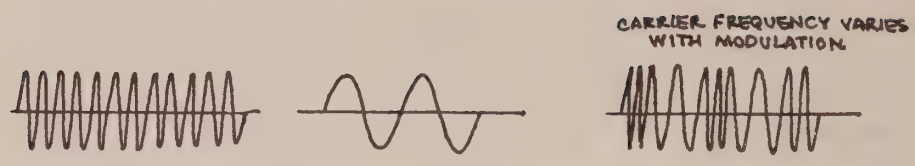


FIG. 1
FREQUENCY MODULATION

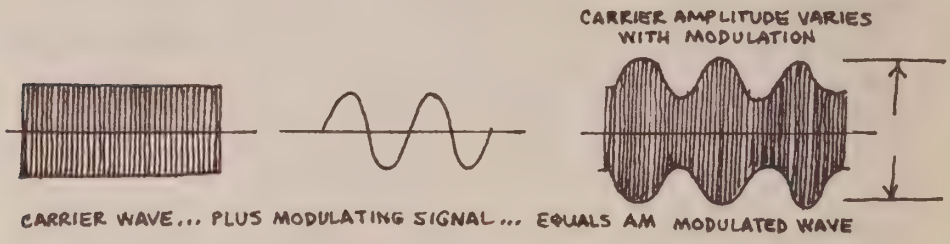


FIG. 2
AMPLITUDE MODULATION

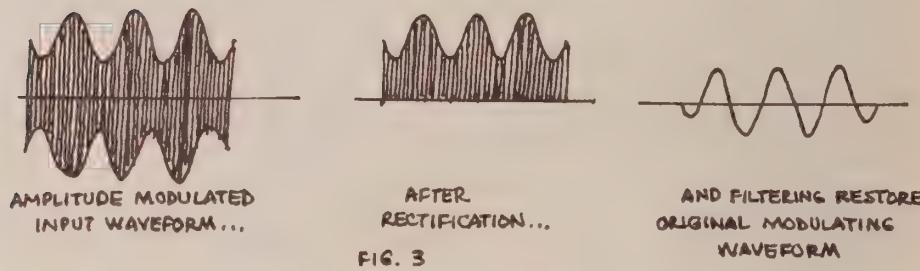


FIG. 3
AM DETECTION PROCESS

SATELLITES

Bill Blomgren, Editor

Send information about satellite frequencies which you have received with type of traffic heard, orbital data, hobby receiving equipment and antennas and questions pertaining to satellite monitoring to: Bill Blomgren, 112 Sandra Lane, Normal, IL 61761.

EDITOR NEEDED!

We need a new Satellites column editor. The editor of this column should be familiar with satellite systems and be an active satellite monitor. The editor also should have knowledge of the history of older satellite systems and be familiar with upcoming new systems. This editor will be required to generate most of the column. If you are interested, please TYPE a letter telling about yourself and qualifications to: RCMA Managing Editor, P.O. Box 216, Willow Grove, PA 19090.

This column is for reporting Public Safety and Special Emergency frequency information, radio system details, radio codes, dispatch areas, unit numbering systems, etc. for police, sheriff, fire, forestry (except USFS), fish and game, highway patrol, state police, prisons, prisoner work camps, local government, highway & street maintenance, port authority/bridge maintenance, animal control, ambulances, paramedics, hospitals, life guards, ski patrol, search & rescue, flood control, civil defense and disaster organizations. Input and questions for this column must be sent to the proper regional Public Safety editor listed below.

PUBLIC SAFETY - CALIFORNIA

Send Public Safety and Special Emergency frequencies, radio system details, and questions for California to: Eric Christensen (CA-LA-045), 3146 W. Ball Road, Apt. 35, Anaheim, CA 92804.

WELCOME TO THE APRIL 1981 ISSUE OF R.C.M.A. PUBLIC SAFETY CALIFORNIA!

I've been told that I now have a separate heading, different from Public Safety West. Sounds good!

REMEMBER: All input for this column should be sent to:

ERIC (CA-LA-045), 3146 W. Ball Rd., Apt. 35, Anaheim CA. 92804

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The following information was sent anonymously to me. The material printed was from the "BASC-Bay Area Scanner Club" newsletter.

CALTRANS TO GO 800 MHz!!!!!

The California Department of Transportation has completed plans to convert mobile radio facilities statewide to the 800 MHz band and on a progressive basis drop the old 47 MHz system. Not only have applications for 212 stations been filed with the FCC, equipment suppliers have been invited to review the system maps and plans as an initial effort to establish specifications and performance parameters.

It is expected that channels selected will be in the reserve blocks not yet released since presently available conventional and trunked channels have all been allocated to entrepreneurial licensees. CalTrans would therefore be the first public safety licensee in California to go 800 MHz.

Details of the plan are still sketchy but it is understood that drawings and system design have been committed to paper in a form beyond conceptual stages. Although initially one or more small systems could go into the frequency scarce Los Angeles or San Francisco areas, by the time the entire State is converted, the expenditure for equipment could easily total several million dollars.

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CALIFORNIA HIGHWAY PATROL-Oakland Dispatch Center

According to an inside source, the California Highway Patrol plans to consolidate Bay Area dispatch to a single control center at Oakland, thereby eliminating the multiplicity of dispatch locations presently in service. In a manner similar to the one in central Los Angeles at the Hollywood Freeway and Vermont Street, Oakland Dispatch Center would have to be a multi-position operation; however engineered to today's technology. Assignments would be computerized or segmented in some way rather than belt-fed by call takers. Counties included in preliminary plans, it is understood, include the CHP offices in Contra Costa, Alameda, Santa Clara, San Francisco and Marin Counties.

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From RON (CA-VE-013):

COUNTY OF VENTURA-Supplemental & Health Service Radio Systems

155.145 MHz. (S) COUNTYWIDE

This channel is used by miscellaneous county agencies including Ventura and

Oxnard College Campus Security Departments, the V.C. Sheriff Honor Farm (handie/talkies), Airport Security at Oxnard & Camarillo Airports. Three of the call signs that I have been able to verify are:

KKD491	Oxnard College	"OC--"
KSZ932	Ventura College	"Victor--"
WXP492	VCSO Honor Farm	"Station 7"

156.015 MHz. (S) Oxnard & Ventura Police Departments

Although licensed to the County, this frequency is used by Oxnard P.D. as "FIVE" and by Ventura P.D. as "BAND FIVE". It is strictly a mobile tactical channel for both agencies.

153.815 MHz. (R) (Input: 158.745 MHz.)

This channel is used by major county agencies including Mental Health, Building and Safety Inspectors, Agriculture and Water Resources.

153.785 MHz. (R) (Input: 158.775 MHz.)

CONTROL FIVE-	Ventura County Marshal	WAU679
CONTROL SEVEN-	Animal Control	WAU733

NOTE: With the merger of the Marshal's Office into the Sheriff's Department, effective January 1, 1981, I don't know if they (VCMO) will remain active on this frequency. A new division was created within the Sheriff's Department called "Court Services Division" to accomodate the ex-Marshals who are now Deputy Sheriffs. I have noticed that some units are now using VCSO Freq. 1: 159.210 MHz. for radio traffic under call signs of "7W--"

162.175 MHz. (S) Possibly Port Hueneme Base Security. (Any information/confirmations?)

151.025 MHz. (R) (Input: 156.240 MHz.)

CONTROL TWO County Roads Department.
Also on this frequency is County Parks & Recreation.

155.205 MHz. (S) County Hospital-Ambulance Coordination

CONTROL POINT (Area)	Ambulance Company	Area Served
1	Mobile Life Support	Ojai Valley
2A	Mobile Life Support	Santa Clara Valley
3	Pruner Ambulance	Thousand Oaks
4	Pruner (Paramedic)	Camarillo
5	Ron Brady Ambulance	Simi Valley
6	Oxnard Ambulance	Oxnard
7	Courtesy Ambulance	Ventura

St. Johns Hospital	Oxnard Ambulance	KSZ302
County General-Ventura	Courtesy Ambulance	KSZ307
Los Robles Hospital	Pruner Ambulance	KLE768

Ambulances access the hospital's radio by the use of a "Touch Tone" signalling pad that activates the hospital's receiver.

From PAUL (CA-VE-008):

The following information is for Pruner Amb. which operates in Simi Valley, Thousand Oaks, Newberry Park, and Camarillo. They also have a unit in Mabilu area. They have two kinds of units EMT and Paramedics.

Simi Valley Area
401 Paramedic
403 EMT

Thousand Oaks Area/Newberry Park Aera
(These units also cover Westlake Village, Agoura, and Moorpark areas)
404 Paramedic
406 EMT
405 Back up not used

these units will respond with LA. CO Fire,
Station 144, 125, 68, 75

Camarillo Area/Somis
408 Paramedic

Mabilu Area
402 EMT
(responding with LA CO. Fire stations
99, 65, 67, 71, and 88 Paramedic station.)

If the Thousand Oaks area has all unit busy in the East area, then Simi Valley covers half way, if the West areas are busy then Camarillo covers. If Camarillo is busy, then a unit will cover and the same for Simi Valley. If the Mabilu is busy then an out side company will cover.

The units use 155.205 for talking to the hospitals, Paramedics use, 463.025/468.025 for Los Robles Hospital the only one in Ventura County. L.A. Co. is Westlake Hospital using the same radios.

I am a dispatcher in the county so this is how I come by my information.

From DENNIS (CA-OR-134):

Enclosed is a partial list of the radio frequencies currently in use in the Imperial County area of Southern California.

Imperial County Sheriff "El Centro 2"
154.590 Freq. 1 used for car-car operations
154.845 Freq. 2 used as car-car and information freq. dispatch-car.
154.995 Freq. 3 dispatch (primary)
155.325 Imperial County EMS (Ambulance-Paramedics-Rescue)
Unit 2660 Ambulance-Desert Shores, Salton City Area
Unit 2645 Ambulance-Brawley Area
Unit 2640 Ambulance-El Centre Area
Unit 2650 Ambulance-El Centre Area
Unit 2651 Ambulance-El Centre Back-up only.
Unit 2665 Ambulance-Desert Shores, Salton City back-up only.
Unit 2825 Rescue Unit Desert Shores Station
Unit 2830 Fire Chief Vehicle-Salton City

California Highway Patrol- El Centre
42.34/47.18 Blue channel primary freq.(85-XXX)

Salton Community Services District (Fire & Rescue)
154.085 Base- Salton City(E- Engine)
E-31 Desert Shores Station
E-33 Salton Sea Beach Station
E-35 Salton City Station
2660 Ambulance Desert Shores-Salton City Area (Desert Shores Station) Dodge Van
2665 Ambulance Salton City Station(Back-up) Cadillac
2825 Rescue Truck Desert Shores Station
2830 Fire Chief Vehicle
Alpha 685 Firefighter/EMT
" 686 "

" 687 Captain/EMT
" 688 Fire Chief
" 689 Engineer/EMT
" 690 Engineer/EMT
" 691 Firefighter/EMT
" 692 Firefighter/EMT

" 693 Firefighter/EMT
" 694 Firefighter/EMT
" 695 Captain/EMT
" 696 Engineer/EMT
" 697 Firefighter/EMT
" 698 Firefighter/EMT/
" 699 Firefighter/EMT

Ambulances 2660 & 2665 also have freq. to contact Riverside County Hospitals on 155.265.

EDITORS NOTE: Now we FINALLY got something on Imperial County!

From Jack LITTLETON (New Member) (CA-?

REDDING

Police:	Fire:	Government:
155.580	154.325	155.760
154.860	154.400	155.805
154.815	154.430	155.880
155.7	453.0	(Utilities) 158.160
	458.0	

SHASTA COUNTY

Sheriff:	Fire:	Government:
158.730	154.430	155.985
154.650*	154.010	158.895
154.920	453.000	158.985
154.680	458.000	
155.190	154.280	
155.700		
154.815*		

CALIFORNIA

Highway Patrol: 42.440 base, 42.280 mobile (Red)
CDF: Local net: 151.160, Region II net: 151.325
OES: 153.755, 154.16
Cal-Trans: 47.08 construction, 47.10 main.
note: Siskiyou County will be changing to 47.02 in January.

NORTHERN CALIFORNIA EMERGENCY MEDICAL CARE COUNCIL

MED 2	463.025/468.025	
MED 3	463.050/468.050	Butte County
MED 4	463.075/468.075	
MED 5	463.100/468.100	Tehema County
Med 6	463.125/468.125	Trinity County
MED 8	463.175/468.175	Northern Sierra Nevadas and Cascades

*= repeater input frequency

From BRYAN (CA-OR-097); ERIC (CA-LA-045); and Police Call (Southern California-1980)

#	"A"	Frequency	Input	Mode	System use-channel designation-notes
1		151.130			(Licensed to "PH" Highway Maintenance)
2		151.145		R	San Bernardino Flood Control-Water Tankers
3		151.160	159.375	R	Orange County Flood Control-Evacuations
4	?	151.175			(Licensed to "PO" Forestry Conservation)
5		151.190	159.225	R	CDF San Diego
6		151.205			(Licensed to "PO" Forestry Conservation)

7		151.220		S	CDF Hand Held Radios "Red Channel"
8	?	151.235			(Licensed to "PO" Forestry Conservation)
9	*	151.265		R	CDF District Net "Region"
10		151.280		S (R)	CDF Hand Held Radios "Blue Channel" (Aircraft)
11		151.295		S (R)	CDF Hand Held Radios "Green Channel" (Aircraft)
12	*	151.310		S (R)	CDF Hand Held Radios "Yellow Channel"(Aircraft)
13		151.325	159.345	R	CDF (Formerly Orange County, to be reassigned)
14		151.340			(Licensed to "PO" Forestry Conservation)
15		151.355	159.300	R	CDF State Net
16	?	151.370			(Licensed to "PO" Forestry Conservation)
17		151.385		R	CDF W. Riverside (Perris)
18		151.400			(Licensed to "PO" Forestry Conservation) MEXICO
19		151.415		R	Calif. Dept Fish & Game (Northeast area)
20		151.430		R	Calif. Dept Fish & Game (Southwest area)
21		151.445	159.390	R	CDF San Bernardino County
22	?	151.460			(Licensed to "PO" Forestry Conservation) MEXICO
23		151.475			(Licensed to "PO" Forestry Conservation) New Freq
24	?	151.490			(Licensed to "IS" Special Industrial) Itinerant

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LOW BAND VHF FREQUENCIES-FIRE SERVICES

46.00 MHz.	Ambulances (various private companies)
46.02	Los Angeles County Marshal (Freq. 1) (KCU833)
46.04	Ambulances (various private companies)
46.06	Orange County-All Depts.-Freq. 2-Mutual Aid
46.12	Crest FPD; Alpine FPD
46.14	Orange County Fire Dept. (STATION 91) (KMG941)
46.16	Net 7: Laguna Beach FD (STATION 85) (KLU236)
	San Clemente FD (STATION 86) (KMF968)
46.20	Mutual Aid-Freq. 2-Alhambra, Monterey Park & South Pasadena Fire Departments
46.26	Net 4: Anaheim Fire (STATION 66) (KMD622)
	Garden Grove FD (STATION 72) (KME293)
	City of Orange FD (STATION 73) (KMF661)
	Stanton Fire (STATION 75) (KMM311)
46.28	Net 6: Westminster FD (STATION 87) (KAU475)
	Seal Beach FD (STATION 81) (KDY396)
	Fountain Valley FD(STATION 80) (KDZ419)
	Huntington Beach (STATION 82) (KMD661)
46.30	Fire Mutual Aid-Low Power
46.32	Net 3: Buena Park FD (STATION 63) (KCZ890)
	Fullerton FD (STATION 64) (KME341)
	Brea Fire Dept. (STATION 62) (KMH644)
	La Habra FD (STATION 61) (KMJ434)
46.34	Net 5: Santa Ana FD (STATION 71) (KME358)
46.36	Avalon, Catalina Island Fire Dept. (KQL546)
46.38	Orange County Fire-Tac 5-(Airport & secondary)
46.42	Orange County-Freq 4-Cross Net Coordination
46.44	Newport Beach FD (STATION 83) (KMB434)
	Costa Mesa FD (STATION 84) (KJN680)
46.46	Fire Protection Districts-San Diego County
46.48	Orange County-Freq 3-Fire Interagency Coord.
46.50	Alhambra FD-Freq 1 (KMK405)
	San Gabriel FD-Freq 1 (KMK565)
	South Pasadena FD-Freq 1 (KWE410)
	Monterey Park FD-Freq 1 (KMK857)
46.54	Avalon, Catalina Island-Harbor Dept. (KDU512)
46.10 (Late Entry)	"VERDUGO" Fire Dispatch for Burbank (WRB451) Glendale & Pasadena Fire Departments

From BRYAN (CA-OR-097):

FIRE & FORESTRY AIRCRAFT FREQUENIES-"AM" AIRCRAFT BAND

118.950 MHz.	USFS Air Attack
118.975	
121.150	Helicopters
121.850	Helicopters
122.900	
122.925	Helicopters
122.950	Unicom-most airports
132.550	

UNITED STATES FOREST SERVICE-VHF RADIO SYSTEM By BRYAN (CA-OR-097)

Frequency	Repeater In	Mode	Comments/Uses/Location
164.125 MHz.		S	Service Net-USFS San Bernardino NF
164.825		S	Communications Technicians SB NF
164.9125		L	
166.375			Bureau of Land Management (BLM) Bakersfield, Ca. KMC499
166.4875			BLM-Riverside KMC457
166.5625			Old "SOUTH ZONE", now "OCC"
166.6125			Inter
166.675		S	"Air Tactics" Channel "A-1"
166.725			Inter
166.775			Inter
167.000			BLM
167.100			BLM (?) Ranger's Fire Comm
168.025		S	South Zone to Angeles NF
168.050		S	T-1
168.075	170.425	R	Comm
168.100	170.450	R	
168.125		R	
168.150	Linked	(NEW)	Cleveland NF-Channel 3-KME 23 Moved from 168.125 Link: 415.275
168.175		S	
168.200		S	T-2 or F-2
168.250			Fire Comm
168.400			Dept. of Interior Fire Comm
168.550			Dept. of Interior
168.600		S	T-3 BIFC
168.625	415.550	S (L)	Air Dispatch "OCC" Old South Zone
168.675			
168.700	170.975	R	Comm 1
168.750	170.500	R	Cleveland NF
168.775			Emergency Intersystem
169.150		S	A-2 Air Tactics
169.175		R	Glendora
169.200		S	A-3
169.350			
169.750			
169.900			Los Padres NF Channel 2
169.925			
169.950		S	Angeles NF Channel 4 (or Ch. 3)
170.000		S	Air to Ground
170.425		Input	See: 168.075

170.450		Input	See: 168.100
170.475			Los Padres NF
170.500		Input	See: 168.750 Cleveland NF
170.550		R	Los Padres NF Channel 1
170.975		Input	See: 168.700
171.475	172.225	R	San Bernardino NF Channel 1
171.575	172.375	R	Angeles NF "Pasadena" KME 22 Link: 415.225 MHz.
171.675		R	Joshua Tree National Monument
171.700		R	Channel Island National Monument
171.750			Cabrillo National Monument
172.225		Input	See: 171.475 San Bernardino NF
172.375		Input	See: 171.575 Angeles NF
172.600			Common Air Safety

NOTE:

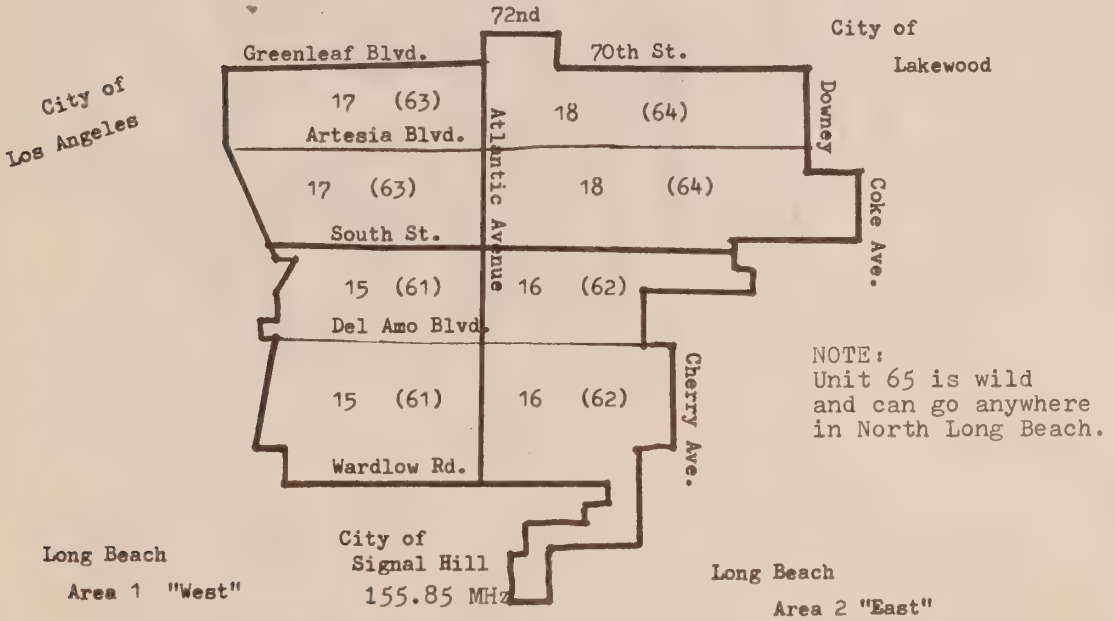
Some of the above information has been taken from Police Call
"S" Simplex
"R" Repeater
"L" Link (via UHF)
"Input" Repeater input frequency

From ERIC (CA-LA-045):

LONG BEACH POLICE DEPARTMENT-Radio System & Division Maps

LONG BEACH POLICE DEPARTMENT-Area 3 (North City & Bixby Hills) Reporting District Map

Maps by ERIC (CA-LA-045)



Freq. 1	460.125 MHz. (R)	Area 1 (Downtown & West)
Freq. 2	460.225 MHz. (R)	Area 2 (East City & Los Altos)
		Area 3 (North City & Bixby Knolls)
Freq. 3	460.350 MHz. (R)	Car to Car & Inquiry
Freq. 4	460.450 MHz. (R)	Detectives

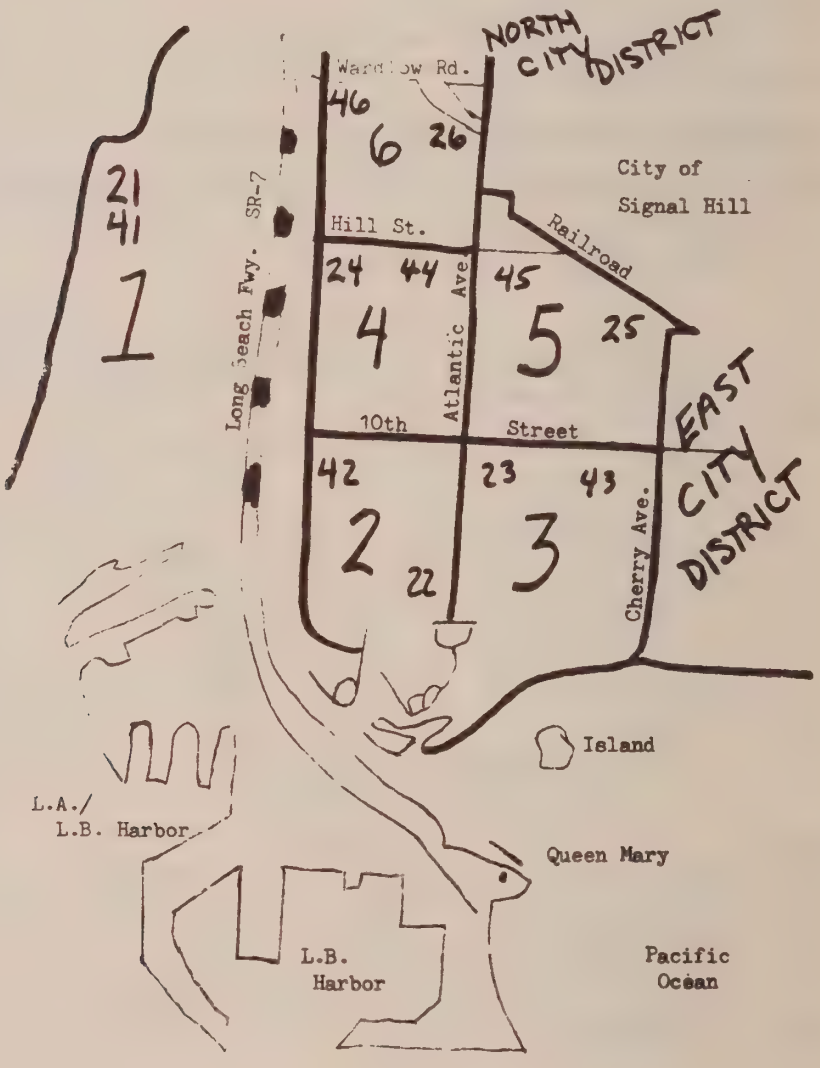
All police patrol units within the City of Long Beach are assigned to one of three Divisions, as listed above. This number (1, 2 or 3) is the first digit of the Unit's unit number. This division number is then followed by a leter (A, B or C) indicating which shift the unit works.

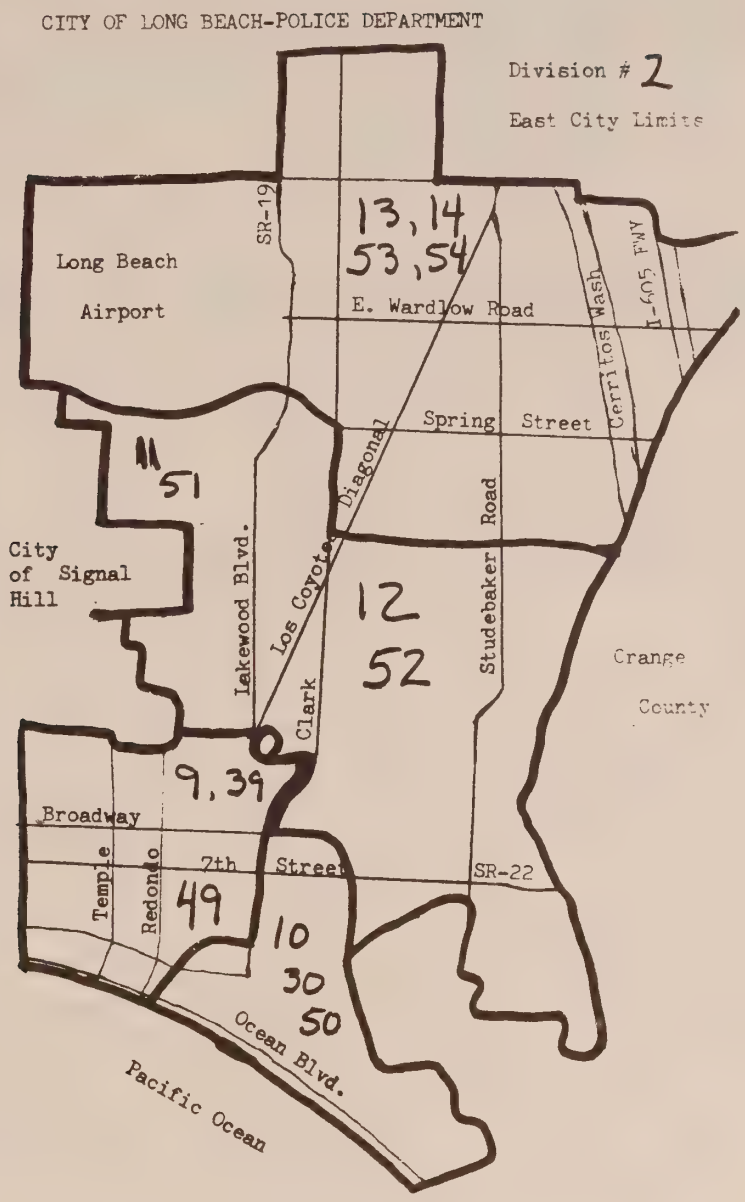
Watch 1	2200-0800 hrs	"A"	series units	2-man cars
Watch 2	0700-1700 hrs	"B"	series units	1-man cars
Watch 3	1400-0200 hrs	"C"	series units	2-man cars

The last one or two digits indicate the specific beat or area assigned.
"S" series units are sergeants. "FOX" is the police helicopter.
"T" series units are traffic and parking enforcement units.
"MACH ONE" is the mobile command post. "K9" is a dog unit w/one officer.
Cherry Avenue is the east/west city division boundary line.
All units switch to Channel One when Watch 3 units go EOW (off duty).
Typical unit numbers: 1A4, 2B10, 3C16, 2A-K9; 3S2 (2nd sgt. in division 3)

POLICE DEPARTMENT-CITY OF LONG BEACH

Downtown Area "1" Patrol Areas





From ERIC (CA-LA-045):

Product Review: California Qwik-Code

This is a new notebook size reference guide for police officers out in the field. It lists principal sections of the California Penal Code, along with selected code sections from the California Vehicle Code, Health & Safety Code, and Welfare & Institutions Code. This booklet (which measures 8½" long by 4" wide, and opens from the top), is a very handy item in a police officer's ticket book. It is a great deal easier to flip through this convenient 20 page reference guide than to try and locate some small, obscure section in in the 700 plus page California Vehicle Code or Penal Code.

Example of information contained in "Qwik-Code":

F	459 PC	BURGLARY: Enter any structure/tent/camper, auto when doors locked, boat, plane, mine, railroad car, trailer coach, etc., with intent to commit grand or petty larceny or any felony.
M	31 VC	FALSE INFORMATION given orally or in writing to a police officer.
F	10851 VC	AUTO THEFT, permanently or temporarily deprive owner.

The publisher has agreed to make these "Qwik-Codes" available to RCMA members. Regular price is $2.95 plus tax. Special RCMA price to be $2.50 including shipping & tax. YOU MUST STATE "RCMA" TO RECEIVE DISCOUNT PRICE. Send to:
Qwik-Code, P.O. Box 538-R, San Juan Capistrano, California 92693

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See you next month! 73's from ERIC (CA-LA-045)

PUBLIC SAFETY - CENTRAL

Send Public Safety and Special Emergency frequencies, radio system details and questions for Alabama, Arkansas, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, North Dakota, Oklahoma, South Dakota, Tennessee, and Texas to: Mike Redman, P.O. Box 1177, St. Charles, MO 63301.

Send material and questions for Illinois, Indiana, and Wisconsin to: John Arendt, 327 Boulder Hill Pass, Oswego, IL 60543.

GREETINGS: Welcome to another PS-Central Column. Have a few announcements to make, then on to business. First, don't forget the Festival on June 6. It's not too late to request a packet of information on this glorious once-a-year event! Contact me at the PO Box for more information. Also I have been promoted from Public Safety Dispatcher at the department for which I work to Communications Specialist for both Police and Civil Defense. Along with the opportunity to use more of my radio experience, knowledge, and expertise (much of which came from the information and letters I've received from RCMA members), I'll be working straight days, with weekends and holidays off for a change. Unfortunately, this gives me less time to write my columns and answer mail, so there may be a few changes coming in the column- but it will always retain the high standards I have tried to maintain for it. And whatever changes are made, I encourage those of you who write regularly to continue doing so- it just may take a few days longer to answer the mail, but it will be answered. I will continue to put forth a large amount of time into the St. Louis Chapter of RCMA, which, by the way, continues to grow. Our meetings are tentatively scheduled for the fourth Sunday of each month, so if you're in St. Louis on the fourth Sunday, give me a call at 314-946-4331 for directions to that month's meeting site. On to this month's collection of information...

OKLAHOMA

STEVE (NJ-049) reports that information he has received indicates a change in frequencies for the State of Oklahoma radio systems to an 800 Mhz. system, that will eventually replace existing systems in local government as well. Can anyone out there in Oklahoma shed some light on this development and share it with our readers?

LOUISIANA

TOM (LA-003) has provided a wealth of information on New Orleans and vicinity. A bit of general information precedes the frequency listings. All channels listed are repeater outputs unless noted. The channel 155.310 is rarely used. Police use a simple district

car numbering system: the first number is the district number, second and third numbers- car or unit number. Exceptions to this are zeroes in positions 2 and 3 which equal rank, and the last 9 numbers are the base station call sign. If these 2nd and 3rd numbers are even- this is a two man car. Odd is a one man car.
Example: 1st District:
100- District Commander
110- Lieutenant
120, 130- Sergeants
101, 103 etc. One man patrol
102, 104 etc. Two man patrol
146, 147, 148 'paddywagons'
149- District base
Remainder of numbering is being changed.

In the Jefferson Parish Sheriff's Office, UHF channels are not fully installed. On the Louisiana State Police Net, changes are being made with the only sure thing being F1 39.50 and F2 39.30 Statewide, plus 39.280 in New Orleans area.

New Orleans PD KKC626

F1	460.025	Districts 1/8	French Quarter/Mid City
F2	460.050	Districts 2	Uptown
F3	460.100	Districts 3/7	Lakefront/East
F4	460.125	Districts 4	Algiers
F5	460.200	Districts 5	Downtown
F6	460.225	Districts 6	Central City
F7	460.300	Information/Special Events	
F8	460.325	Information/Special Events	
F9	460.400	Intelligence	
F11	460.475	Detectives	
F12	460.500	Unknown	
F13	460.525	Computer Access	
F14	460.550	Computer Access	

Also 155.310 and 39.500

EMS: KLY797

F1 462.950 Future EMS Dispatch F2 462.975 Future EMS Dispatch
Med 1- Med 8 Paramedics (KH3946)
155.340 Ambulance to Hospital

Fire: KWJ304

Ch.A	453.150	Teleprinters, Paging, Back up dispatch
Ch.B	460.575	Dispatch
FG 1	460.600	Fireground, Districts 1,3,5,7, Repeater
FG 1A	460.600	Simplex
FG 2	460.625	Fireground, Districts 2,4,6,8, Repeater
FG 2A	460.625	Simplex

Local Government:

Street Department	155.760	
Sanitation Department	155.715	
Central Maintenance	155.820	also Property Management/Park Comm.
Health	153.860	Repeater, 154.085 Simplex
Traffic Engineering	156.135	Repeater, 159.060 Input
Mosquito Control	on Health Channel	
Aviation Board	453.550	Repeater, 458.550 Input
Sewer & Water Board	153.410	and 153.650
Civil Defense	45.600	
Audobon Park Commission	453.025	Simplex
SPCA	155.205	

Orleans Parish Sheriff:
155.250 Repeater, 158.910 input Mobiles
453.375 Repeater, 458.375 input Paging & Portables

Jefferson Parish Sheriff: KKD744

F1	39.120	West Bank	F3	39.500	State PD/Sheriffs Net
F2	39.620	East Bank	F4	39.220	Talk & Service

Jefferson Parish Fire Departments: KKU200
East Bank Common 33.700 F2 33.520 Working
F1 33.700 Dispatch F3 33.940 West Bank

Kenner Fire Department: KKS809
F1 33.700 Dispatch F2 33.440 Working
Havahan Fire Department: KLU312
F1 33.700 Dispatch F2 33.640 Working

Third District VFD: KFN530
F1 33.700 Dispatch F2 33.560 Working

West Bank Common:	33.940		Davey Crockett VFD	154.280,	154.295
Avondale VFD:	33.760	KZQ798			KKZ704
Baratavia VFD:	33.680	WZN299	Terrytown VFD	154.145,	154.160
Bridge City VFD:	153.890	KVG842	Gould VFD	33.820	KQP575
Harvey VFD:	33.960	KVN531	Marerro VFD	33.600	KKG503
Live Oak Manor VFD	33.920	KVA271	Westwego VFD	33.880	KKK332

Jefferson Parish Local Government:
Mosquito Control: 154.995 Repeater/158.805 Input
" " 154.980 Repeater/158.760 Input
Dept. of Utilities: 153.470 Repeater/158.250 Input
Dept. of Roads & Bridges 151.085 Repeater/159.120 Input
Civil Defense 45.360, 45.600
Ponchartrain Levee Dist. 154.025 Repeater/156.150 Input

St. Bernard Parish Sheriff: KLO290
F1 453.900 Repeater/458.900 Input Dispatch
F2 453.650 Repeater/458.650 Input

St. Bernard Fire: WCT223
F1 154.385 Repeater/153.950 Input
F2 154.010 Fireground Simplex

St. Bernard Local Government:
153.935 Mosquito Control
45.600 & 154.965 Civil Defense

Louisiana State Police: KKC590
F1 39.500 F2 39.300 F3 39.280

Mississippi River Bridge Authority:
453.750 Repeater/458.750In Bridge Maintenance
F1 453.400 Repeater/458.400In Police Dispatch KZV214
F2 453.675 Repeater/458.675In Police Working
F3 453.750 Repeater/458.750In Bridge Maintenance Crews

Orleans Parish Levee Board: KBQ242
F1 155.085 Repeater/158.775In Police Dispatch
F2 155.985 Repeater

Lake Ponchartrain "Causeway" Police KKR461
F1 453.950 Repeater/458.950In Main Dispatch
F2 39.620 Jefferson Parish Sheriff, Southshore
F3 39.720 St. Tammerny Sheriff, Northshore
F4 39.500 State Police/Sheriffs' Net

Angola State Prison 42.04 and 42.12 (To Mississippi State Patrol)

Port of New Orleans:
156.000 Repeater/158.895 Input Engineering
155.835 and 155.100 River Pilots
154.785 (Dispatch) 155.790 (Detectives)(F4) Harbor PD KJR275
Also have New Orleans PD & FD.

New Orleans Housing Authority: 158.820

New Orleans Superdome: 453.425 and 453.775, both repeaters

Charity Hospital:
155.205 Ambulance Dispatch, 155.430 Ambulance to Hospital
453.800 (Repeater) Hospital Police 157.745 Paging
Med 1-8 Paramedics

Louisiana State University Medical Center
151.925 Paging 464.125 Campus Police

Louisiana State Civil Defense:
45.280, 45.480, 45.520, 45.600, 46.540 All Statewide
(45.600 used by LA Nuclear Energy Division.)

Tom has also provided some 10-code information and a LA State Police district map that we'll try to get in next month! Many thanks to Tom for this exciting complete listing.

TEXAS

KEN (TX-003) has come through again with an update to his now famous series on the Texas State Patrol. Next month we'll discuss Ken's article on Texas Parks and Wildlife-Take it away, Ken...

Greetings once again to my fellow members and readers of the Public Safety Central column. Since writing the article on widely used frequencies in Texas, which has been serialized in this column in the last few months, a few pieces of additional information have come forth.

First and foremost is discovery of DPS region and district boundary maps. Member David Litsinger, TX-32, found these at the library. Many thanks for sharing them, Dave! Dave has also uncovered a DPS map depicting the DPS' 24 hour radio facilities across the state. The information accompanying the map seems to indicate that the map is circa 1976, when the low band was still the primary communications band. I have taken the DPS radio map data and the license data from POLICE CALL, Vol. 7 and compiled a roster of DPS radio facilities that updates the roster submitted previously. I have also updated the DPS map that Dave has submitted to correlate with the license information from the 1980 POLICE CALL, Vol 7. Some of these newer facilities have been verified off the air and some have not. If the readers can confirm any of these facilities as correct, please contact this column. That would be of tremendous help toward insuring an accurate depiction of these facilities, as license files do not always give the most accurate portrayal of a given system's details.

With the addition of the DPS boundary information, certain other pieces of previously attained information have given rise to a theory concerning the DPS' Texas Highway Patrol (THP) division unit numbers. The theory is = THP units in the 'A' district of a TLE region use X200's and X400's and those units in the 'B' district use X100's and X300's ('X' being the appropriate region #). At least such appears to be the case in TLE region 6. Can anyone confirm this theory in other regions?

Also some newer information has been uncovered on the DPS' one, two, and three digit unit numbers asignment. They are as follows:

One & two digit units= State officials and other top level DPS administrative supervisory units.
100's= low 100's--Aircraft Section
high 100's--Disaster Emergency Service section
200's= Administrative units/various
300's= Administrative units/Executive
400's= Administrative units/Identification & Criminal Records (ICR)

500's= Administrative units/general services (including Personnel & Training, Fleet services, Radio Shop, mechanics, etc.)
600's= Texas Rangers service

Regarding the four digit unit series of the DPS, all indications are that the outline given in the original article are correct except the units with the #8 in the second digit place (that is, X8XX units) apparently were specified too exactly. It now appears that these units are more likely field units of general services (?). Further info is still requested.

I feel it should be emphasized again that DPS vehicle transceivers have a built-in scanner-like device. The implication of this is that any combination of channels can be used for a reply from a base or mobile. 'Official' policy gives preference to the "normal" mode, which is usually F1 for DPS mobile to base, F2 for DPS mobile to DPS mobile, F3 for car to car with units of a different agency, F4 for inter-city mobile to base, F5 (in TLE units only) for resident SO repeater operation. This, however, is not necessarily always the case. Operator error on the part of either the mobile unit or the base dispatcher or in the case of a car to car contact, on the part of either or both mobile operators, can result in some strange combinations of mobile/base or mobile/mobile contact regardless of the exact channel selector switch setting. For example, 154.680 car/155.370 DPS base, 154.950 car (including on occasions an SO or PD mobile)/155.460 DPS base, 155.460 car/154.950 car, 155.460 car/155.460 base, and if a supervisor's vehicle is involved in the communication, 154.680 car/155.460 supervisor car, are all possible and the serious monitorist should be aware of these possible combinations. Sometimes these combinations are done on purpose due to either equipment malfunctions or for more secure communications. I have also noted a few DPS base stations having the capability of monitoring the area's SO repeaters and thereby could answer their own units using the SO repeater. Therefore an SO repeater/155.460 DPS base combination is also a possibility in those areas. I do not know how wide spread the monitoring capability is among the different DPS base facilities but it should be kept in mind when monitoring this agency. It is unknown whether this capability is a regular scanner or a number of fixed receivers in the bank of radio control consoles. Generally speaking most rural SO's monitor 155.460 with a fixed receiver in order to monitor DPS broadcasts. Thus an SO repeater/155.460 DPS base or mobile combination is also a possiblity with the resident DPS trooper if necessary, as the DPS mobile unit would have to be equipped with the SO freq.

In the case of SO and PD mobile transceivers, these mobiles are usually not equipped with the built-in type scanners such as the DPS unit's searcher. These transceivers are wired so as to receive the main SO channel on a priority even when the mobile is switched to another freq but that is about the extent of the transceiver's flexibility. The priority is apparently selectable for on and off operation. It has been observed that SO and/or PD transceivers when utilizing the inter-city frequencies and not making the proper channel selection for the mode desired are not able to make the contact desired, even though the contact is well within the mobile's range but the mobile will always be receiving the SO repeater unless the priority switch is off. For example, the mobile may use ch 3 to call another SO base or ch 4 to call another agency's mobile, neither of which will bring the desired results due to the channel arrangement for the frequencies involved. The lack of understanding the channel arrangement has often lead to some rather amusing comments and situations. DPS vehicles seem to rarely have any trouble since they automatically receive both frequencies despite the channel selector switch setting.

SO and PD mobiles are equipped with scanners on a select basis. The practice varies with the area. If there are two whip antennas mounted on the mobile--one about 45" long ((5/8th wave)(not to be confused with a CB ant if the unit is so equipped) and one about 18" (¼ wave--for scanner))-you can be fairly sure that the mobile unit is scanner equipped. Current practice seems to be to monitor the inter-city frequencies, DPS, EMS channels, and any EMS and Fire dispatching channels, plus the adjacent county SO repeaters. Some units will use the scanner to cross-talk with local units but rare is the case of cross-

talking with other SO units on each unit's respective repeater. At least such is the case around here. Any uses different from this description should be brought to the attention of this column.

Random thoughts: DPS base stations and SO base stations are electronically capable of simul-casting on two or more of the frequencies with which they are equipped to transmit on, in any combination of the dispatcher's choice.

On the inter-city system there are sketchy pieces of information of certain municipalities' and military's helicopters being equipped to transmit directly on the Texas inter-city base frequency of 155.370. Information on the useage of the frequency in air mobiles is requested. If indeed such air mobile useage of that frequency is practiced, I believe it would be for a "base-in-the-air" capability.

Tentative Roster of Texas DPS Radio Stations
(subject to changes, corrections, and additions)
(supersedes previous list submitted and/or published)

The following are the known or suspected primary DPS 24 hour communications facilities across the state. For the purposes of this list these listed facilities will be defined as a transmitter operated directly by a district office through the use of direct transmitter control or through the use of telephone line connection to the actual transmitter site. The purpose of this list is to differentiate between the main transmitters used by an office and those transmitters operated by radio remote control.

Location	Callsign	Identifies as:	Other comments
Abilene	KKC 674	Abilene	-primary xmtr/callsign
Abilene	WIV 274	?	-?auxiliary xmtr?
Amarillo	KKI 412	Amarillo	
Austin	KKD 303	Austin	-primary xmtr/callsign
Austin	KKL 745	Austin	-auxiliary xmtr
Austin	KEV 491	?	-Capital/Executive security base
Beaumont	KKE 469	Beaumont	
Bryan	KKV 232	Bryan	
Childress	KDJ 262	Childress	-primary xmtr/callsign
Childress	KAT 313	?	-use unknown
Corpus Christi/ Calallen (?)	KKC 784	Corpus Christi	-primary xmtr/callsign
Corpus Christi/ Riviera	KLA 637	?	-?auxiliary xmtr/or remote site?
Corpus Christi	KZR 521	?	-use unknown
Dallas/Garland	KKA 603	Dallas	
Del Rio/ Carta Valley	KDB 200	Del Rio	-possibly a remote site/xmtr as is located in Edwards Co. However, callsign apparently is Del Rio main callsign as heard on air.
Del Rio	KEW 981	?	-listed as primary xmtr/callsign on DPS list of stations ??
El Paso	KKD 400?	El Paso	-license callsign uncertain, was primary callsign when the old low band was in use.
El Paso	KKA 640	El Paso	-listed as primary xmtr/callsign on DPS list of stations
El Paso	WXT 665	?	-use unknown
Harlingen	KKA 592	Harlingen	
Houston	KKC 583	Houston	-primary xmtr/callsign
Houston/Spring	KCV 407	?	-use unknown
Kerrville	KCS 503	Kerrville	
Lampasas	KFO 761	?	-possibly obsolete license?
Lampasas/Mix	KGY 212	Lampasas	-primary xmtr/callsign
Laredo	KAS 430	Laredo	-primary xmtr/callsign
Laredo	KKA 304	?	-use unknown

Lubbock	KKB 489	Luboock	-primary xmtr/callsign
Lubbock	KXE 555	?	-use unknown
Lubbock/Crosbyton	WZC 509	?	-this may instead be a remote ??
Lufkin	KKH 775	Lufkin	
McAllen	KVT 812	?	-unsure if this is a primary station-may be remote of Harlingen ?
Midland	KXA 479	?	-use unknown
Midland	KKS 896	Midland	-primary xmtr/callsign
Mineral Wells	WXR 376	?	-use unknown
Mineral Wells	KEP 583	Mineral Wells	-primary xmtr/callsign
Ozona	WZX 474	?	-use unknown
Ozona	KSO 940	Ozona	-primary xmtr/callsign
Pecos	KKD 397	Pecos	-primary xmtr/callsign
Pecos	KFO 688	?	
Pierce	KUZ 831	Pierce	
San Angelo	KKA 451	San Angelo	
San Antonio/ (Austin)	KKM 304	KKM 304	-callsign of mobile command posts can be use as temporary bases anywhere in state as needed
San Antonio/ Elmendorf	KKI 413	San Antonio	-primary xmtr/callsign
Sherman/Howe	KCY 568	Sherman	
Sulphur Springs/ Blossom	KJW 750	Sulphur Springs	
Texarkana	KYL 815	Texarkana	
Tyler	KKI 414	Tyler	
Victoria	KKQ 736	Victoria	
Waco	KXZ 546	?	-use unknown
Waco/Ross	KKC 523	Waco	-primary xmtr/callsign
Wichita Falls	KKE 241	Wichita Falls	-primary xmtr/callsign
Wichita Falls	KZT 393	?	-use unknown

NOTE: Laredo and McAllen are not listed in the DPS list of radio stations. However, Laredo has been heard on the air as a full (at least part time) radio facility and McAllen is suspected of being a new full time station with the new high band system.

The following are listings of known or suspected remoted secondary transmitters. The listed call letters are rarely, if ever, heard. The controlling station's call signs are more likely to be heard instead, that is to say, the main transmitter callsign is heard rather than the more appropriate control frequency's callsign. However, it is believed that some of these stations now have automated morse code ID'ers. Can anyone confirm this idea? These listings are taken from POLICE CALL, Vol. 7 and co-ordinated with information from DPS station listings and these in turn are co-ordinated with on the air monitoring.

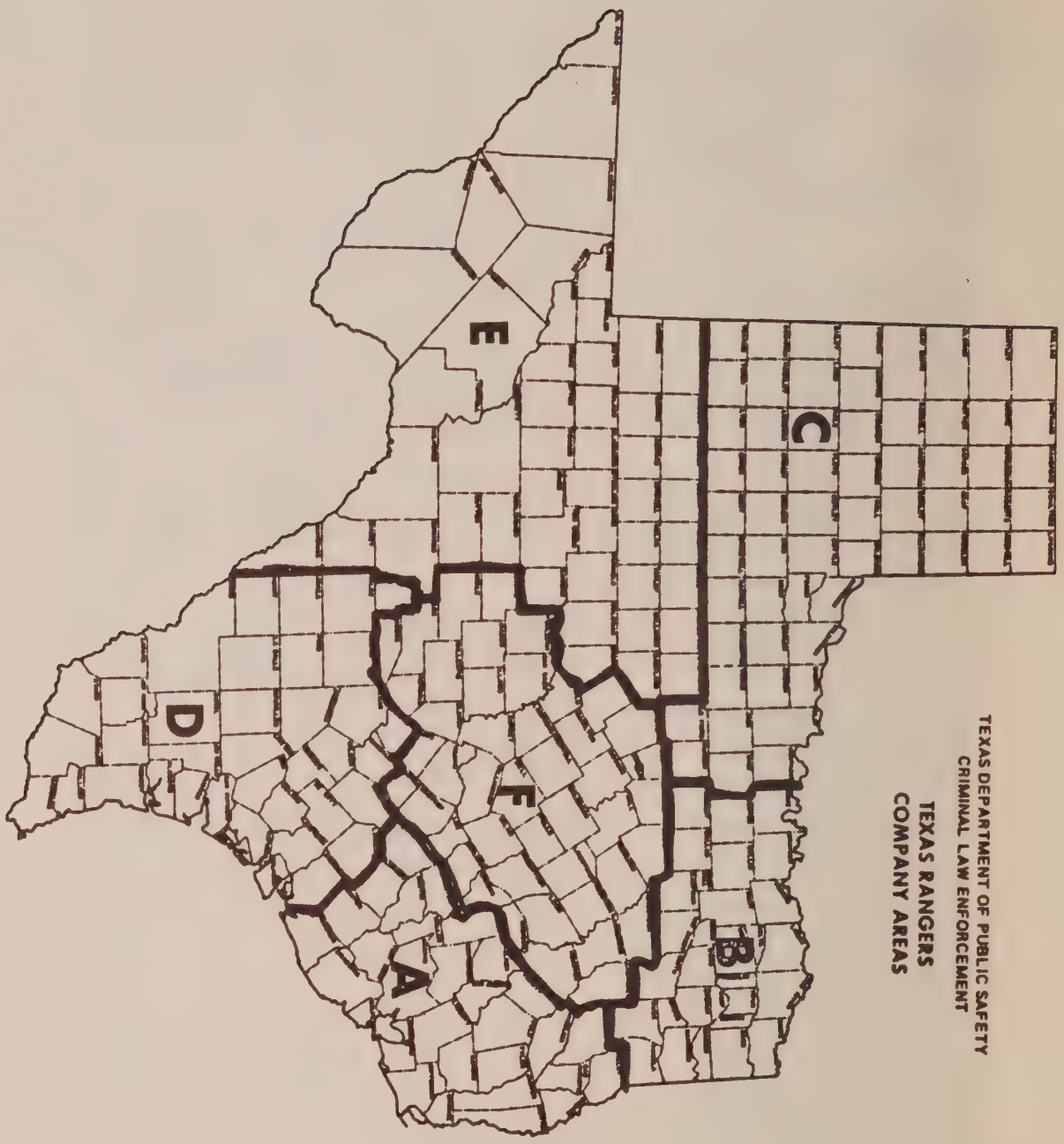
Location	Site Located in:	Callsign	Controlled by:	Frequency
Adrian	Oldham Co.	KDL 966	Amarillo DPS	155.460
Alanreed	Gray Co.	KBW 859	?Amarillo or Childress DPS?	155.460
+Alvin	Brazoria Co.	KLA 926	?Houston DPS?	155.460
Beckville	Panola Co.	KKR 920	?Tyler DPS?	155.460
Benjamin	Knox Co.	KVT 906	?Childress DPS?	155.460
Coldspring	San Jacinto Co.	WXY 320	?	155.460
+Crane	Crane Co.	KFB 535	?Midland DPS?	155.460
+Cusseta	Cass Co.	KYL 816	?Tyler or Texarkana DPS?	155.460
Fairfield	Freestone Co.	KKY 731	?Waco DPS?	155.460
Flynn	Leon Co.	WYF 947	?Bryan DPS?	155.460
Ft Davis (MacDonald Obsv.)	Jeff Davis Co.	KKE 225	Pecos DPS	155.460
Gail Mountain	Bordon Co.	KKQ 431	Midland DPS	155.460
Glen Rose	Somervell Co.	KCN 659	?Waco DPS?	155.460
Glen Rose	Somervell Co.	KDT 55	(Obsolete license for freq ??)	
+Glidden	Colorado Co.	KVY 672	Pierce DPS	155.460

Grapevine	Tarrant/Dallas Co.	KKQ 395	Dallas DPS	155.460
Guadalupe Pass	Culberson Co.	KKE 226	Pecos DPS	155.460
Hitchcock	Galveston Co.	KLA 926	(obsolete?? same as Alvin, Tx)	
Iraan	Pecos Co.	KRE 90	(obsolete license for freq ??)	
+ Iraan	Pecos Co.	KFB 985	?Ozona DPS?	155.460
Jasper	Jasper Co.	KCY 569	?Beaumont DPS?	155.460
Junction	Kimble Co.	KDG 756	Kerrville DPS	155.460
Loraine	Mitchell Co.	WYV 276	?	155.460
New Braunfels	Comal Co.	KKR 920	Austin DPS	155.460
Plainview	Hale Co.	KUJ 618	?Lubbock DPS?	155.460
Pontotoc	Mason/San Saba Co.	KFG 596	Lampasas DPS	155.460
Rio Grande City	Starr Co.	KBC 421	?Harlingen DPS?	155.460
Sierra Blanca	Hudspeth Co.	WXT 666	?	155.460
Temple	Bell Co.	KOM 721	?Waco DPS?	155.460

+=These stations do not have any apparent associated remoted repeater stations although one has been observed to have a downlink repeater. The discrepancy can be an oversight to have applied for a license or the POLICE CALL directory inadvertently neglected to list such a license for the downlink repeater (see the listings below). Expired licenses are also a possibility.

The following are listings of known or suspected remoted repeater stations that rebroadcast DPS mobiles' transmitters on 154.680. These transmitters' callsign are rarely heard. Note that most all of these match the locations of the previous list and are in most cases co-located at the same xmtr site.

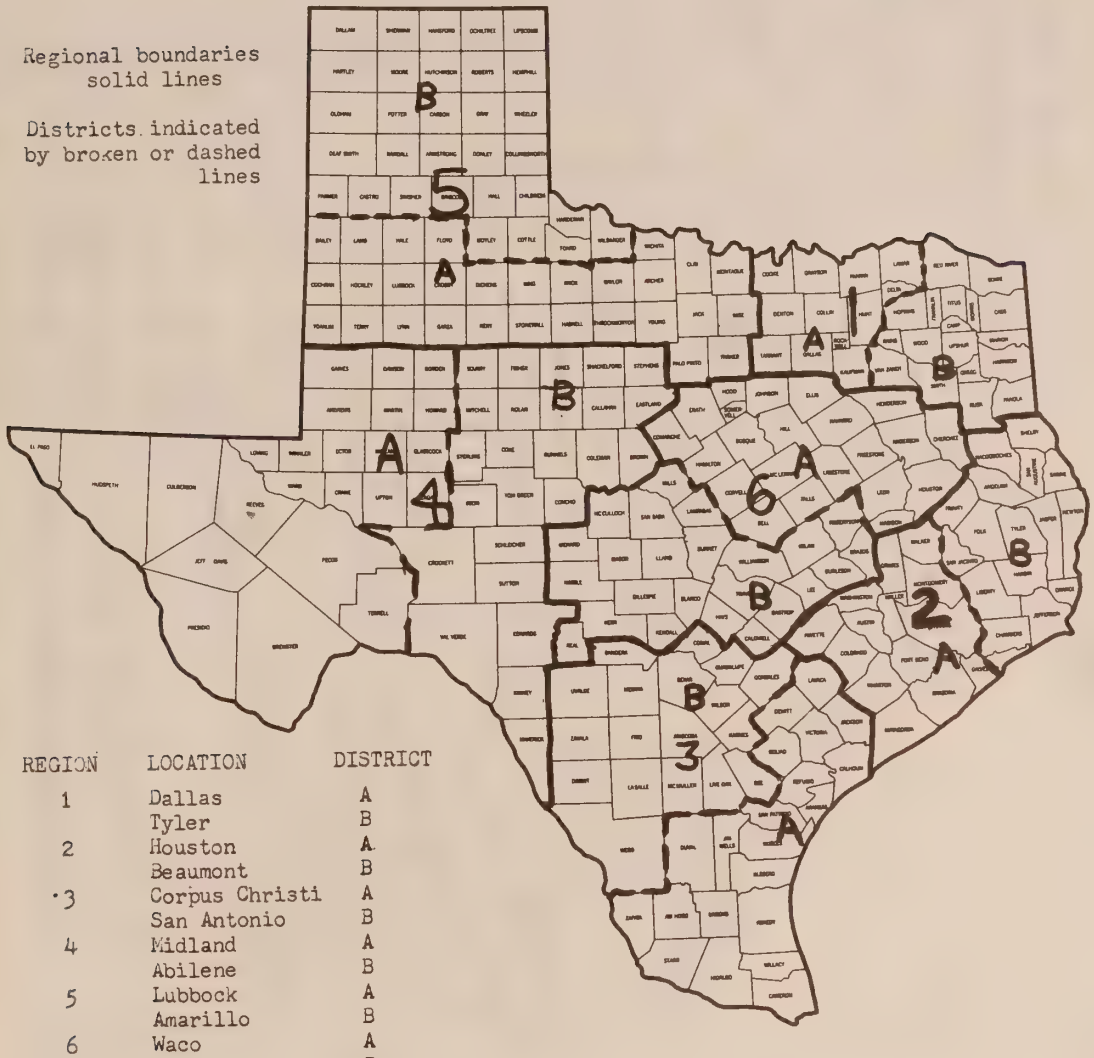
Location Site	Located in:	Callsign	Frequency
Adrian	Oldham Co.	KFR 30	159.09
Alanreed	Gray Co.	KDR 44	159.21
Alvin	Brazoria Co.	WFE 895	159.09--marked "CO" in POLICE CALL probably a misprint
Beckville	Panola Co.	KKM 24	159.09
Benjamin	Knox Co.	WAA 436	159.09
Coldspring	San Jacinto Co.	WXY 320	159.21
Crane	Crane Co.	WFR 659	159.09--marked "CO" in POLICE CALL probably a misprint
Fairfield	Freestone Co.	KLO 35/ KKY 731	159.21--why two licenses ???
Flynn	Leon Co.	WAC 348	159.09
Ft Davis	Jeff Davis Co.	KKC 70	159.09
Gail Mountain	Bordon Co.	KKZ 24	159.21
Glen Rose	Somervell Co.	KDT 55	159.09
Grapevine	Tarrant/Dallas Co.	KKY 98	159.09
Guadalupe Pass	Culberson Co.	KKC 71	159.21
Jasper	Jasper Co.	KEX 48	159.21
Junction	Kimble Co.	KKW 96	159.21
Loraine	Mitchell Co.	WYV 275	159.21
New Braunfels	Comal Co.	KTO 68	159.21
Plainview	Hale Co.	WOA 62	159.09
Pontotoc	Mason/San Saba Co.	KRQ 80	159.21
Rio Grande City	Starr Co.	KBW 56	159.21
Sierra Blanca	Hudspeth Co.	WXT 666	159.21
Temple	Bell Co.	KKA 62	159.09


E
C
D
F
B
A
TEXAS DEPARTMENT OF PUBLIC SAFETY
CRIMINAL LAW ENFORCEMENT
TEXAS RANGERS
COMPANY AREAS

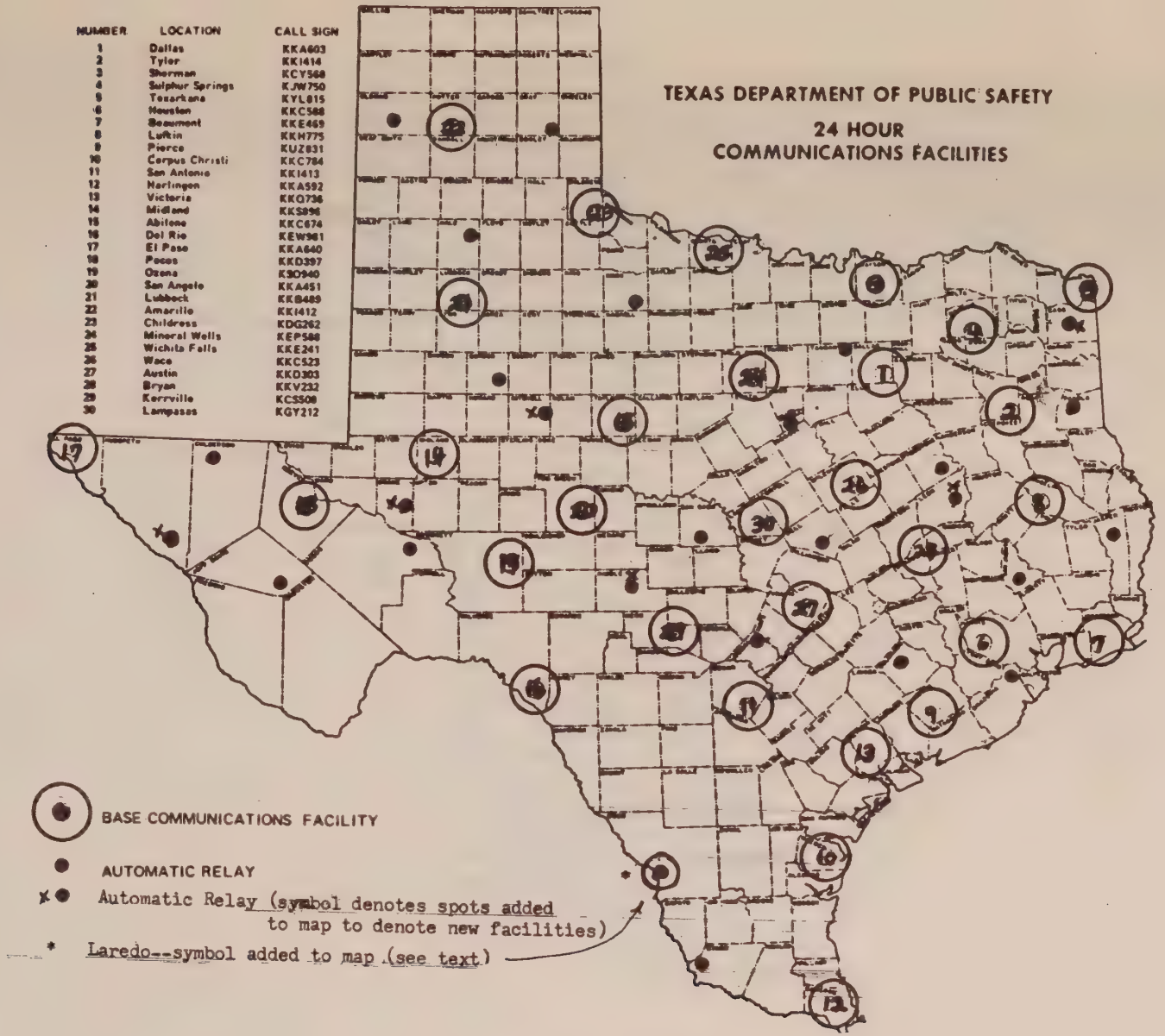
TEXAS DEPARTMENT OF PUBLIC SAFETY
TRAFFIC LAW ENFORCEMENT DIVISION
REGIONAL BOUNDARIES and DISTRICT LINES

Regional boundaries
solid lines

Districts indicated
by broken or dashed
lines



REGION	LOCATION	DISTRICT
1	Dallas	A
	Tyler	B
2	Houston	A
	Beaumont	B
3	Corpus Christi	A
	San Antonio	B
4	Midland	A
	Abilene	B
5	Lubbock	A
	Amarillo	B
6	Waco	A
	Austin	B


TEXAS DEPARTMENT OF PUBLIC SAFETY
24 HOUR
COMMUNICATIONS FACILITIES
BASE COMMUNICATIONS FACILITY
AUTOMATIC RELAY
Automatic Relay (symbol denotes spots added to map to denote new facilities)
Laredo--symbol added to map (see text)

NUMBER	LOCATION	CALL SIGN
1	Dallas	KKA603
2	Tyler	KK1414
3	Sherman	KCY568
4	Sulphur Springs	KJW750
5	Texarkana	KYL815
6	Houston	KKC588
7	Beaumont	KKE469
8	Lufkin	KKH775
9	Pierce	KUZ831
10	Corpus Christi	KKC784
11	San Antonio	KK1413
12	Harlingen	KKA592
13	Victoria	KKQ736
14	Midland	KKS896
15	Abilene	KKC674
16	Del Rio	KEW961
17	El Paso	KKA640
18	Pecos	KKD397
19	Ozona	KSO940
20	San Angelo	KKA451
21	Lubbock	KKB489
22	Amarillo	KK1412
23	Childress	KDG262
24	Mineral Wells	KEP588
25	Wichita Falls	KKE241
26	Waco	KKC523
27	Austin	KKD303
28	Bryan	KKV232
29	Kerrville	KCS508
30	Lampasas	KGY212

Many thanks to Ken for that complete revision to the Texas State Patrol story. Now, on to John...

Greetings from the "Land of Lincoln" and welcome aboard to spring and some better weather. (It gets rough at times). Time to get out in the yard and remove the winter's residue. There's lawn mowing, gardening, etc. - just to name a few chores. Lest I ramble on further, there's lots of material to cover in this month's column, so we'll "spring ahead" to the business at hand.

CHANGED RCMA CHICAGO CHAPTER MEETING DATE An important reminder - the June 7th session at Nancini's has been moved back one week to Sunday, June 14th. This change was made so that members in the Chicago area (and other parts of the Midwest) would be able to attend the RCMA Spring Festival at St. Charles, Mo. on June 6th - hosted by our counterparts in the St. Louis area chapter. (I'm planning on being in attendance - hope to see you all.)

COLUMN EXPANSION - MICHIGAN JOINS PUBLIC SERVICE IL/IN/WI As of this issue, members in MI are asked to send their news and views to this editor. Welcome aboard and a special "Happy Monitoring" to you MI members. (Mike Redman will finish out any MI material currently on hand in his column. Any new MI material will be covered in this column.)

INDIANA EMERGENCY WEATHER & DISASTER ALERTING SYSTEM Jeff (IL-064) has passed on details of this system which is available to every scanner owner or to individuals and organizations utilizing special-purpose radios. When severe weather conditions exist (or other natural disasters) exist, a sequential 2-tone frequency (592.5HZ and 802.5HZ) is broadcast on the statewide frequencies of 42.42MHZ (Indiana State Police) and 155.37MHZ (statewide intersystem). The special-purpose radios are normally muted and automatically "open up" when the proper 2-tone sequence is broadcast. The system is tested every weekday at 1000 by the Indiana State Police districts. (Important note: NOT available to motorists due to state law banning police monitors in motor vehicles.)
EDITOR'S REMINDER: A similar system exists in Illinois. A different tone sequence is used by the Illinois State Police - with all transmissions taking place on 42.50MHZ. The system is tested every Tuesday at 1000 by the various districts. (Note: Available to motorists, as no state laws banning mobile police monitors are known to be in effect.)

ILLINOIS STATE POLICE NEWS
1. Martin (IL-125) has found the new high band car-car freq. for Dist. 15 - Tollroads. 155.925 is used by mobiles and also for aircraft speed checks. (Editor's notes: Originally reported in the Jan. column, 155.925 will replace the old 42.66 freq. MOST Dist. 15 units no longer have 42MHZ radios, but occasional 42.66 car-car traffic is still heard coming from the new units that still have the old 42MHZ radios.)
2. Martin also has patrol maps of I.S.P. Dists. 7 and 17 (old 5A) available. Club members desiring this information should send an SASE requesting same directly to: Martin Bourgeois, Rt. 7, Box 8, Kankakee, Ill. 60901.

COOK COUNTY, IL MUTUAL AID RADIO SYSTEM for law enforcement and fire agencies in the Chicago suburban area will not come into existence due to lack of necessary funds, per a newspaper article received from Mike (IL-014). This "complete" a story that I previously contributed back in the March, 1979 Newsletter.
NEW CHICAGO SUBURBAN P.D. FREQS. Courtesy of Ron (IL-009) and Mike (IL-014):
470.5875 - "Bedford Park Regional" - also in use by Bridgeview, Hickory Hills, Hodgkins, justice, Summit, and Willow Springs.
470.9375 - "Homewood-Flossmoor Regional" - also in use by Country Club Hills, Glenwood, and Hazel Crest.
471.1875 - Now in use by Roselle and Itasca.

PEKIN, IL P.D. NEW FREQ. Tom (IL-030) reports that 460.500 rptr. out has been placed into service for detective use only. The freq. is not used on a regular basis - only as needed.

UNIVERSITY OF CHICAGO P.D. Mike (IL-014) reports that this security organization can be found on 464.525 rptr. out. It operates like a "mini" police dept. - responding to all types of calls on the campus proper and in the neighboring Hyde Park area. Although private security as such, it works very closely with the regular Chicago Police Dept. (Editor's note: I've inserted this contribution into my column due to the public service function of this security organization.)

CHICAGO, IL DEPT. OF HUMAN SERVICES Rich (IL-129) reports that operations are now being conducted on 453.750 rptr. out (WDT862) - a change from the 453.825 previously reported in February's column.

INDIANA STATE POLICE FREQ. CHANGE In his travels, Jack (ex CA-OR-118) reports 42.16 as the car-base freq. for Dist. 13-Lowell. Base-car and car-car operations are still on 42.12.

INDIANAPOLIS AREA FREQ. INFORMATION Thanks to Jack (ex CA-OR-118) - our "traveller" and also to an Indiana member that asked to remain anonymous, a "picture" of the Indianapolis area has finally come into view and I'll lay the good numbers on you:

1. Marion County SD freqs.
   154.74 rptr. (154.95 in) North
   155.61 rptr. (155.85 in) South
   155.01 rptr. (154.71 in) Detectives (Note: no rptr. as such shown in the "Police Call")
2. "Marion County Rural Fire" can be found on 154.130. There is a central dispatch office for the volunteer FD's surrounding Indianapolis (meaning everything but the city itself and a few major suburbs). Very active.
3. Indianapolis PD freqs.
   F1 460.475 rptr. North (Adam & Edward Sectors)
   F2 460.450 rptr. East(Baker & Frank Sectors
   F3 460.400 rptr. South (Charles & Henry Sectors)
   F4 460.025 rptr. West (David & George Sectors)
   F5 460.050 rptr. Traffic
   F6 rptr. Investigators
   F7 460.125?rptr. Administration & Services (Citywide?)
   F8 rptr. Vice/Narcotics/Special Investigations

The "citywide" freq. is used for coordination and local "emergency" type messages - much like Chicago's citywide freqs.

4. Indianapolis Area Paramedics. The city's squads operate using a decentralized dispatch system. They are each assigned a "district" within the city where they "roam" while awaiting a call, or they may choose to go stationary at their "post" - which might be a fire or police station, coffee shop, or major intersection. They are identified simply as "Dist.___" and are dispatched by "Wishard Control" on 462.950. (Wishard Hospital is the primary city hospital). The MED channels are used for telemetry and medical direction. Also - HEAR 155.34 (called IHERN - Indiana Hospital Emergency Radio Network) is used by outlying ambulances/paramedics to talk with area hospitals. "Wishard Control" is the coordinating station for this net.

The "heart" of this entire communications network is the Indianapolis PD Communication Center - planned in 1972, activated in 1976, and completed in 1977. Included is the "911" emergency telephone system, computer aided dispatch, and issuance of a personal portable radio to each public safety officer capable of county-wide operation. Incoming calls for police are immediately dispatched while other calls pertaining to fire, emergency medical services or outside jurisdiction are quickly referred to the responsible county-wide agency. All calls are automatically recorded enabling radio replay for review purposes.

MISC. INDIANA CONTRIBUTIONS Courtesy of Mark (IN-014):
1. Hamilton County S.D. now heard on 155.250 rptr. out.
2. Plainfield FD now using 154.130 as dispatch freq. ID's as KWU260.

MILWAUKEE, WI CITY FREQ. LIST George (WI-004) and Tom (WI-006) have combined efforts to pass on a most comprehensive contribution. Details as follows:

POLICE
45.46, 46.02 B/M and 45.78 (mobiles)-WQB720 (new freqs.)
155.64 rptr (156.03 in)-Tactical Squads
159.15 rptr (154.77 in) - Youth Aid Bureau
453.40 rptr - Paging and Data
460.025 B/M - F6 (Squad-Squad Direct & Tow-Away Desk)
460.075 rptr- F1 (Dists. 1/3/5/7)
460.150 rptr-F5 (Special Situations)
460.225 rptr -F2 (Dists. 2/4/6)
460.275 rptr - Special Assignments Squad
460.350 rptr - F3 (Squad-Squad Dists. 1/3/5/7/)
460.375 rptr - F7 (Detective Bureau)
460.450 rptr - F4 (Squad-Squad Dists. 2/4/6)
460.475 rptr - F8 (Squad-Squad)
460.500 rptr - Vice Squad
NOTES: Normal mode of operation on 460.075 and 460.225 is unrepeated. Repeater activated chases and descriptions of wanted persons or vehicles. Scrambling capability present on 460.275 and 460.500. 158.850 not in use. No activity defined for 154.650

FIRE
153.830 B/M-Handie Talkies (Fire scene)
154.130 rptr (153.950 in) - F1 & F2
154.295 B - Intersystem
154.385 rptr (153.770 in) F3 Paramedics
No activity defined on 153.890

OTHER CITY SERVICES
45.240 - Emergency Govt. 45.400 - Sewerage Commission
151.265 Base - KGT579 Parks?(new freq.) mobiles on 159.345
153.590 B/M - KSC279 Water Dept.
154.570 mobiles - KB8444 Public Schools
154.600 mobiles - KB8548 "MECCA" (Convention Center)
155.715 - Bureau of Municipal Employment
156.225 rptr (159.015 in) KJB830 Sanitation - North
158.805 rptr (153.740 in) - Radio Shop
158.820 rptr (153.800 in) - Public Works
159.195 rptr (156.120 in) - KJB830 Sanitation - South
453.150 base - "MECCA" (Convention Center)
453.575 rptr - KBC610 Environmental Control
453.700 B/M - KLD824 School Board
453.975 rptr - City Hall/Alderman
462.750 base - Paging for Public Schools

What I've done is save the bad news for last:
DVP RADIOS COMING TO IL The IL Dept. of Law Enforcement has new highband DVP radios on order. There are several varieties involved:
1. 16-channel MICOR 80 watt mobiles
2. 8-channel MT500 hand helds
3. 1 (or more) 32-channel SYNTOR 80 watt units with scan feature and "pre-programming" of any freq. in the 149 to 175 MHZ range.

Equipment checkout will be made in the Chicago area. Undoubtedly, the primary "customers" will be the DCI (Dept. of Criminal Investigation) agents and probably also MEG (Metropolitan Enforcement Group) agents. The "bearer" of this bad news has asked that he remain anonymous. (I guess that Mike Redman's "Christmas dream" wouldn't be such a bad idea afterall).

With that piece of news - all that's left to say is:

Happy Monitoring????

PUBLIC SAFETY - WEST

Send Public Safety and Special Emergency frequencies, radio system details and questions for Alaska, Arizona, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming to: George Hoggatt, 17473 E. 16th Drive, Aurora, CO 80011.

January 25, 1981 A few contributions trickle in. Just remember that the column is written two months before you read it.

In January and last month I included information on the Colorado State Microwave System. One member has questioned using this type of information since it is not "monitorable" without special equipment. I have the same information for Arizona, but before I publish it, I would like the opinion of the membership on if it should or should not be printed. Send me a postcard with your opinion or better yet, use a letter and include a few of your favorite frequencies.

After last months column was in the mail, I spent two days at the Denver FCC office, looking through the frequency microfiche. Good thing - as of January 15th, the microfiche will not be available. The frequency data is all on a computer and a terminal will be in the Denver office. The terminal is not for public use. I have written the FCC in Washington DC to ask where, if anywhere, the frequency lists will be available for public inspection. When they answer, I'll let you know here.

The review of the FCC records and some recent changes have shown past data to be in error. So this month we will begin with:

CHANGES-ADDITIONS-CORRECTIONS

JANUARY ISSUE

Denver Communications Center page 29

Delete Broomfield. Broomfield is local control only.

Add:

Franktown	KAH369	154.665	PP BA	CSP District 1
	KAH369	154.905	PP BA	CSP Channel 3
	KDT61	1885.000	PL OF	microwave

The call KAH369 is the CSP temporary base license and will be used until the regular license arrives. The equipment is installed and being tested now. It should be in full operation by the time you read this. The location is the Franktown microwave relay.

Department of Natural Resources Radio System pages 29 and 31

Add:

TAC-1	151.280	Cherry Creek State Recreation Area
TAC-2	151.340	Squaw Mtn.
TAC-3	151.370	Chatfield SRA

tone #5 162.2 Hz. The tones are used by both control and mobile stations to select a particular transmitter

MARCH ISSUE

Microwave map

Communications said the Cortez and Trinidad connections were in and operating. Their 1979 map shows the Trinidad link as in, but the FCC records show no licenses as of 10-1-80 for Cortez, the un-named relay north of Cortez or Trinidad. If true, the North Mtn. relay goes directly to La Monte Pk.

Highway map

The Twin Mtn. transmitter is controlled from Pueblo and Canon City. Add a new transmitter on San Antonio Peak New Mexico, call KIU255 control point Alamosa

DENVER POLICE (Feb/March 1980, page 17; June 1980, page 16; January 1981, page 30)

A member who wishes to remain anonymous, has cleared up the confusion over the DPD channel numbering:

453.350	458.350	PP RP	Channel 6
453.700	458.700	PP RP	Channel 7
453.900	458.900	PL RP	mobile phones - may be channel 8
453.600	458.600	PL RP	Channel 5 is both the information channel and tactical channel for special events/emergency

All Denver VHF police channels are no longer used. The licenses have been canceled and the frequencies are available for reassignment.

FORT LOGAN MENTAL HEALTH CENTER Denver, CO from Roger (CO-018)
Uses the State Institutions frequency, 155.310 simplex. Call KDJ591.
(ed. note - this call is also licensed to them on 155.400 no traffic monitored)

RADIO COMMUNICATION CODE SIGNALS

10-1 Receiving poorly
10-2 Receiving loud and clear
10-3 Stand by
10-4 Acknowledge, will comply
10-7 Out of service at _____
10-8 In service
10-9 Repeat message
10-10 Lock _____
10-11 Unlock _____
10-12 Are you on a mission?
10-14 Check registration
10-15 Have patient
10-16 Call Denver Police - send to _____
10-17 Have patient at (location); need Patrol's assistance
10-18 Have patient at (location); need transportation
10-20 What's your location?
10-23 Call this number _____
10-24 Return to station
10-25 Meet ambulance at _____ and escort to _____
10-26 Accident at _____. Send Police and ambulance.
10-27 Report to parking lot _____. Traffic problem.
10-28 Fire at _____. Call Denver Fire Department.
10-29 GO TO _____DISTURBANCE, EMERGENCY
10-30 Go to _____ No disturbance
10-31 Pick up staff at _____. Search for patient
10-33 Go to phone. Take outside call
10-34 Vehicle broke down at _____
10-35 Disregard last assignment
10-36 Correct time

FOR AN EMERGENCY USE 10-29 ONLY!!

ARIZONA DEPARTMENT OF PUBLIC SAFETY from Karl (CA-OR-022)

(ed. note - the following is from an officers instruction sheet dated 6/75)

UHF CHANNEL SELECTOR SUMMARY

GREEN (1) Your local District channel. Use in your own district only. Has repeater capability controlled by the dispatcher.

GREEN C-C (2) District car to car. Use between UHF equipped cars normally assigned to the same district and within range of each other.

YELLOW (3) Statewide channel. Use when out of your own district. Has corssband capability to State (VHF) frequency. Has repeater capability controlled by the dispatcher.

YELLOW C-C (4) State car to car channel. Use between any UHF equipped patrol cars within range of each other.

Blue, Blue C-C, Violet, Violet C-C, Amber - not installed

Repeater Operation
The one radio site in a district which provides the most radio coverage will be set up to repeat all mobile radio transmissions. Any other sites in the dispatchers district may be set up to repeat when requested by the Patrolman. Mountaintop sites are not interconnected. Therefore, only the cars using the same mountaintop repeater can hear each other on color coded channels. The dispatcher handles other operations. Car to car transmissions are not repeated by any radio site.

Crossband Patch
Operates only between VHF "State" and UHF yellow channels and vice versa. You must ask the dispatcher to activate crossband patches - available over most of state - Activation in districts not yet converted to UHF operation is complex and may take more time. Permits direct car to car traffic between UHF and VHF equipped patrol cars. The dispatcher is avialable to both users.

DISTRICT	HQ CITY	VHF FREQS.		UHF FREQS.		DISPATCH LOCATION
		BASE	MOBILE	BASE	MOBILE	
1	Kingman	154.905	154.905	460.475	465.475	Flagstaff
2	Flagstaff	154.665	154.665	460.025	465.025	Flagstaff
3	Holbrook	155.460	155.460	460.300	465.300	Flagstaff
4	Yuma	155.505	155.505	460.500	465.500	Phoenix
5	Phoenix	154.935	155.190	460.325	465.325	Phoenix
6	Eloy - Toltec	154.845	154.845	460.025	465.025	Phoenix
7	Globe	154.695	154.695	460.475	465.475	Phoenix
8	Tucson	155.445	155.445	460.425	465.425	Tucson
9	Sierra Vista	154.680	154.680	460.325	465.325	Tucson
10	Phoenix	155.475	155.475	460.300	465.300	Phoenix
11	Mesa	154.860	154.860	460.400	465.400	Phoenix
12	Prescott	154.665	154.665	460.425	465.425	Flagstaff
all	---	154.935	155.290	460.225	465.225	Statewide

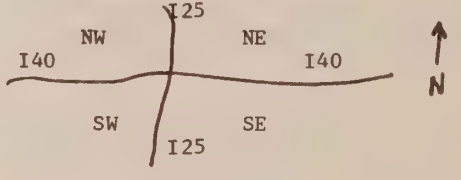
NEW MEXICO from Fred (NM-005)

BASE	MOBILE	USE
155.550	155.370	Statewide law enforcement radio - State Police, small towns and many counties use this frequency. Many small towns and counties use this frequency only and are dispatched by local State Police District dispatcher. Cars may also transmit and receive 155.550 for car to car. State Police use it for car to car.
155.580	155.685	State Police District 11, Socorro and District 10, Farmington
155.520	unk	State Police District 5, Albuquerque
155.790	unk	State Police District 6, Gallup
37.060	37.060	New Mexico Mounted Patrol, an auxiliary police volunteer group
44.800	44.920	New Mexico Game and Fish
159.330	unk	Dept. of State Forestry (most traffic on this frequency)
159.420	unk	Dept. of State Forestry
151.085	unk	State Highway Dept.
151.130	unk	State Highway Dept.
151.115	unk	State Highway Dept.

State Police units are identified by officer numbers which are the license numbers on their vehicles. 100+ numbers are officers. 1-99 are Captains and Lieutenants. Socorro 1=Socorro County Sheriff, Socorro 2 thru 7=Socorro County Deputies, Socorro 8=Magdalena Town Marshall, Socorro 9=Magdalena Assistant Marshall.

BASE	MOBILE	TYPE	USE
154.400	153.890	PF RP	Albuquerque FD channel 1 dispatch
154.160	154.160	PF BM	Albuquerque FD channel 2 command, fire inspectors
154.310	154.310	PF BM	Albuquerque FD Statewide Fire frequency
155.850	155.850	PP BM	Albuquerque PD Channel 1 information, tactical
155.490	155.490	PP BM	Albuquerque PD Channel 2 NW and SW
155.670	155.670	PP BM	Albuquerque PD Channel 3 NE
155.250	155.250	PP BM	Albuquerque PD Channel 4 SE
155.010	155.010	PP BM	Albuquerque PD channel 5 car to car and tactical
154.860	154.860	PP BM	Albuquerque PD channel 6
154.815	154.815	PP BM	Albuquerque PD channel 7

SECTOR MAP Albuquerque



Albuquerque PD unit numbering:

Supervisors 150 series
NW 100 series
SW 200 series
SE 300 series
NE 400 series
PS-1 to PS-15 Public Serivce Assistants, non-sworn officers for traffic control, motorist assist, etc.

154.445	154.445	PF BM	Magdalena Volunteer Fire Dept. Ch. 1 pagers, dispatch and normal operations
154.310	154.310	PF BM	Magdalena VFD ch. 2 Statewide fire frequency
155.115	155.115	PL BM	Magdalena VFD ch. 3 Command (future local govt. use)

COLORADO STATE PUBLIC SAFETY RADIO SYSTEM (from your friendly local editor)
This system serves both the Colorado State Patrol (CSP) and as the statewide police radio system. As far as I can tell, all towns and counties have at least some units on these frequencies. As in New Mexico, many of the smaller towns and low population counties use this system as their only radio.

Until recently, the CSP felt that repeaters were not usable. In the last couple of years, they have changed their mind and several are now in operation. They are:

Near Simla	154.665, 154.740 out	155.445 in
Lake City	154.695, 154.830, 154.905 out	155.445 in
Pagosa Spgs.	154.695, 154.830 out	155.445 in
Silverton	154.695, 154.830 out	155.445 in
Near Julesburg	154.770, 154.905, 154.935 out	155.445 in
Bonney Dam SRA	154.770, 154.935 out	155.445 in

The above repeaters are an unusual system. The control stations and mobile units use the same input frequency. The output is controled by tone. Control stations bring up the base frequency, mobile units bring up the mobile frequency on the repeater. Both can select a different tone and use the statewide channel (channel 3, 154.905).

Kenosha Pass	154.695 out	155.505 in

This one is a normal repeater. When used it is refered to as Channel 4.

Near Carlton	155.130 out	155.565 in

This also is a normal repeater. The use is unknown to me. The mobile call is the same as the regular CSP mobile call and the control stations are at the same exact locations as the CSP dispatch locations. Therefore this is probably related to the State system.

Westcliffe and Twin Mtn.	154.845 out	155.730 in

This also seems to be a normal repeater set up. The mobile call is <u>not</u> the same as the CSP. Its use is also unknown.

Channel names:

When the mobile unit transmits on the mobile frequency, this is known as channel one.

When the mobile unit transmits on the base frequency, this is known as channel two.

The statewide frequency (154.905 base and mobile) in called channel 3.

Frequencies, Districts

Each District is headed by a Captain stationed at the headquarters city. Each district is broken into two or more TROOPs, headed by a lieutenant. Some Troops have substations called posts. A post is under a sergeant.

District 1 HQ Aurora Service area - east of Denver to Kansas plus Boulder County
Base 154.665 Mobile 154.740
TROOP A - Limon, Post at Burlington
TROOP B - Broomfield
TROOP C - Castle Rock Posts at Littleton and Aurora

District 2 HQ Pueblo service area southeast Colorado
base 154.935 mobile 154.770
TROOP A - Pueblo posts at Salida, Canon City
TROOP B - Colorado Spgs.
TROOP C - La Junta post at Lamar
TROOP D - Trinidad

District 3 HQ Greeley Service area Northeast Colorado
base 154.935 mobile 154.770
TROOP A - Greeley post at Ft. Lupton
TROOP B - Sterling
TROOP C - Ft. Collins

District 4 HQ Grand Jct. Service area - northwest Colorado
base 154.695 mobile 154.830
TROOP A - Grand Jct.
TROOP B - Craig
TROOP C - Eagle post at Glenwood Spgs.

District 5 HQ Durango Service area - Southwest Colorado plus the San Luis Valley
Base 154.695 Mobile 154.830
TROOP A - Alamosa
TROOP B - Durango post at Cortez
TROOP C - Montrose

District 6 HQ Golden Service area - Denver west, South, Middle and North Parks
base 154.695 mobile 154.830
TROOP A - Golden post at Idaho Spgs.
TROOP B - Frisco post at Hot Sulpher Spgs.

Unit Numbering
Captains - Command plus 1 or 2 digits
Lieutenants - L plus 1 or 2 digits
Sergeants - S plus 1 or 2 digits
Technicans (similar to a corporal) - T plus 1 or 2 digits
Patrol Units - Color, digit, letter, 1 or 2 letters
Color indicates the shift, actual hours vary with the assignment
Red=graveyard
Blue=Days
Green=Swing
The first digit is the District number, the letter is the Troop letter and the last digit(s) tell the area.

Other State units on this system use the agency name and a number.

All other users use the entity name and a number.

Ambulances use the name of the operating entity.

Federal Government units do not appear to use the agency name and may still use the old numbering system of unit number between 2000-2199

PUBLIC SAFETY - EAST

Send Public Safety and Special Emergency frequencies, radio system details, and questions for Connecticut, Delaware, District of Columbia, Florida, Georgia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Vermont, Virginia and West Virginia to: Richard Barnett, P.O. Box 428, Newton Highlands, MA 02161.

Because of the length involved, we are holding input to this column until next month.

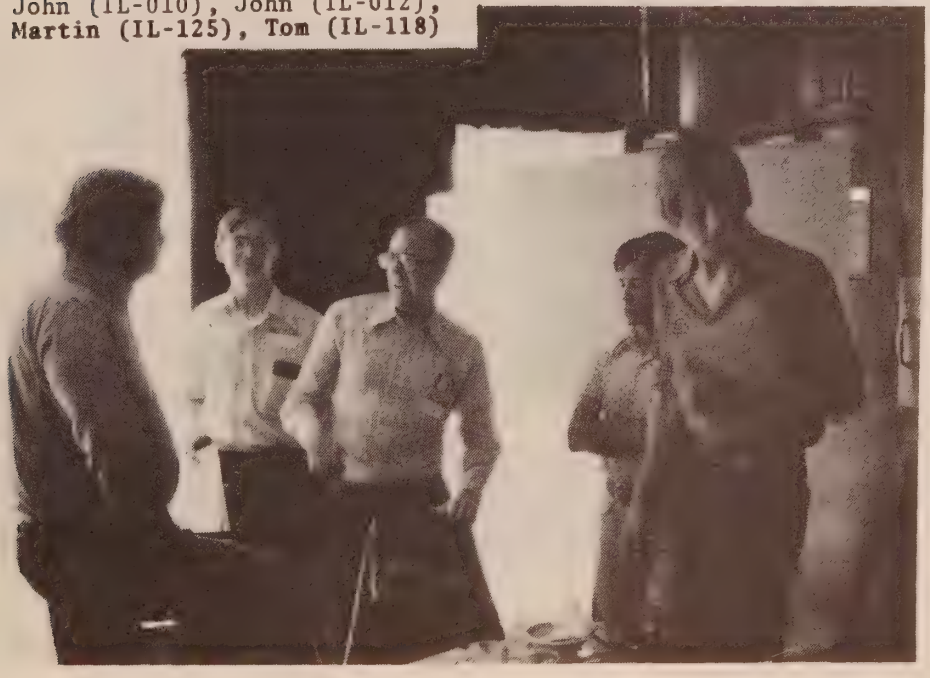
photo department

Send photographs of custom monitor listening posts, unusual or extensive monitor or two-way antenna systems, user station consoles (PD, Fire, Paramedics, etc.) or other monitor/two-way related equipment of interest. Photographs must be 3 x 5 inches or larger, black-and-white with good contrast, sharply focused and attractively composed. Each photo must be accompanied by details and explanations of equipment. Photos will not be returned. If you have questions, write first and please include an SASE. **Send photos or write to: Mike Redman, P.O. Box 1177, St. Charles, MO 63301.**

Here are some shots of a recent Chicago Chapter Meeting taken by Ed Sirovy, (IL-004).

Tom (IL-118), Rich (I1-025), Ron (IL-006), Brandt (IL-084), John (IL-010), Ray (IL-033), Bill (I1-002), Tom (IL-030), **and one of the lovely waitresses at Nancini's.**

John (IL-010), John (IL-012), **Martin (IL-125), Tom (IL-118)**



George (WI-004), Tom (WI-006), Pat (IL-079), Ron (IL-009), Rob (IL-036), and more!

Rob (IL-036), Bill (IL-002), Mike (IL-014) and his mother.

ASSOCIATION OF NORTH AMERICAN RADIO CLUBS

NEWS HIGHLIGHTS

ANARC is a federation of the most responsible, well established radio listening clubs in North America. RCMA attained Full Member status in ANARC in 1977. For a list of the ANARC Member and Associate Member clubs send a self-addressed, stamped business size envelope with your request to the address below. For an annual subscription to the monthly "ANARC Newsletter" send $3.50 to: ANARC, 557 N. Madison Ave., Pasadena, CA 91101.

The "ANARC/HAP Guide to DX Listening" 1981 edition is due to be published in May 1981. The 1981 edition is a complete revision of the 1980 edition which sold out in six months.

May 22-25 EDXC conference Berne, Switzerland. For details send two IRC's to EDXC 81, P.O. Box 4, St Ives, Huntingdon, Cambs. PE17 4FE England.

July 17-19 ANARC Convention Thunder Bay, Ontario. For details ANARC 81, P.O. Box 142, Thunder Bay, Ontario P7C 4V5 Canada

July 31-Aug 2 WTFDA Convention Oklahoma City For details contact (w/SASE) John Zondlo, 1802 N. Rockwell apt 107, Bethany, OK 73008

Aug 20-23 IRCA Convention Calgary, Alberta.

NEW MEMBERS LIST

AL 015 CARR, SCOTT;PO BOX 1485;BIRMINGHAM, AL 35201
AR 011 POLLARD A. E.;7400 ROCKWOOD RD;LITTLE ROCK, AR 72207
AZ 028 RHODES, SUSAN;3112 W ORANGEWOOD;PHOENIX, AZ 85021
AZ 029 HUNTER, JOHN W;3220 E SELLS DR;PHOENIX, AZ 85018
AZ 030 VITTI, JOE -PHOTO DEPT;ARIZONA DAILY STAR;4850 S PARK AVE TUSCON, AZ 85714
AZ 031 STARNER, T.A.;1106 TUSCON ST;SAFFORD, AZ 85546
AZ 032 LASKO, DEAN;PO BOX 27412;TUCSON, AZ 85726
CAAL029 POLKINGHORN, CLIFF;14310 ACACIA ST;SAN LEANDRO, CA 94579
CAAL030 BRITTON, JACK J;3310 BAYLIS ST;FREMONT, CA 94538
CACC012 ESSER, AL;960 AMADOR;RICHMOND, CA 94805
CAFR001 MONTROSS, GEORGE;38797 ROAD 28;KINGSBURG, CA 93631
CALA355 WILLIS, HUGH M;3591 HOWARD;LOS ALAMITOS, CA 90720
CALA356 SWANSON, VERD;300 E GLENOAKS BLVD;GLENDALE, CA 91207
CALA357 HARRIS, W.B.;1312 W 56TH ST;LOS ANGELES, CA 90037
CALA358 WILSON, LOU ANN;335 E 230TH ST;CARSON, CA 90745
CALA359 FIGUEROA, DANIEL JR;1761 PARK AVE APT O LONG BEACH, CA 90815
CALA360 BARRET, VIOLET;10530 GROVEDALE DR;WHITTIER, CA 90603
CALA361 KNOTT, TERRY;15356 JUPITER ST;WHITTIER, CA 90603
CALA362 CREECY, JAMES W JR;3433 W 108TH ST;INGLEWOOD, CA 90303
CALA363 FRY, DAVID;11719 E 216TH ST;LAKEWOOD, CA 90715
CALA364 SCHAUB, JOHN K;10363 LANARK ST;SUN VALLEY, CA 91352
CALA365 WADSWORTH, GARY D;25724 VELAN DR;VALENCIA, CA 91355
CALA366 SHANNON, KEVIN B;14120 HAMLIN ST, #14;VAN NUYS, CA 91401
CAOR181 JONES, J.F.;33232 SEABRIGHT DR;DANA POINT, CA 92629
CAOR182 SCHRYER, RON KA6LQL;2701 FAIRVIEW ROAD COSTA MESA, CA 92626
CAOR183 BOAGNI, VINCENT JR;PO BOX 236;DANA POINT, CA 92629
CAOR184 DVORAK, FRANK;11 STONE PINE;IRVINE, CA 92714
CARI032 TUTTLE, CARL;2750 W ACACIA W-11;HEMET, CA 92343
CASA014 FROST, LYNN;6916 FARMINGTON WY;SACTO, CA 95828
CASA015 USHERWOOD, KRISS G;1812 WENTWORTH AVE;SACTO, CA 95822

CASB034 FUHRMAN, RONALD;703 E CAMINO COLE G10
SANTA MARIA, CA 93434
CASB035 RISHER, BRUCE D;GENERAL DELIVERY;CREST PARK, CA 92326
CASD034 ZWEIGART, JOHN B;P O BOX 103;SANTEE, CA 92071
CASD035 HORSFALL, RICHARD A;302 W EASTRIDGE 'N
ESCONDIDO, CA 92026
CASF019 FORNI, EMIL R;1 COLLEGE TERRACE;SAN FRANCISCO, CA 94112
CASN005 MULLER, PAUL;8103 B ST;WINDSOR, CA 95492
CAVE022 KLIMA, CAROLYN L;131 JAMES DR APT A;VENTURA, CA 93001
CO 026 CRUTHERS, PAUL;4125 GILPIN DR;BOULDER, CO 80303
CT 043 NOLAN, BILL;PO BOX 8;FRAMINGTON, CT 06032
DC 007 WILLIAMS, F.K.;PO BOX 19252;WASHINGTON, DC 20036
FL 088 HUARTE, JUAN B;440 NW 59TH COURT;MIAMI, FL 33126
FL 089 MOORE, JAMES B;R R 2 BOX 260-6;LEESBURG, FL 32748
FL 090 RUSSELL, STEVEN;4923 SPRINGFIELD DR
WEST PALM BEACH, FL 33406
FL 091 PHALEN, LARRY;P O BOX 390-613;MIAMI, FL 33139
FL 092 KATZ, JOEL;PO BOX 6771;HOLLYWOOD, FL 33021
FL 093 HAZELWOOD, W.R.;5104 GARETTE DR;JACKSONVILLE, FL 32210
FL 094 SIMONS, LINDA L;NO 227;9367 FONTAINEBLEAU BLVD
MIAMI, FL 33172
FL 095 COLOSI, STEPHEN;11481 SW 80TH TERRACE;MIAMI, FL 33173
GA 028 ROMANS, CHARLES;1454 BLANCHE DR;MARIETTA, GA 30067
GA 029 BAIRD, JIM;303 DAVIDSON DR;DALTON, GA 30720
IL 166 BUSEKRUS, MARK H;COLES CTY EMER SER;P O BOX 613
CHARLESTON, IL 61920
IL 167 STOCK, WILLIAM G;2119 - 13TH ST;MOLINE, IL 61265
IL 168 HIRSCH, MARTIN D;2528 W FITCH;CHICAGO, IL 60645
IL 169 RUNZHEIMER, LELAND;1028 MARY AVE
WINTHROP HARBOR, IL 60096
IL 170 WILEY, JOHN C;421 W. BRYN MAWR;ROSELLE, IL 60172
IL 171 LANGDON, JIM;770 N WESTERN AV 2A;LAKE FOREST, IL 60045
IL 172 GRAFF, JACK;ST JOSEPH HOME BOX 428;80 W NORTHWEST HWY
PALATINE, IL 60067
IL 173 BAUER, RICHARD K;151 ALGONQUIN;PARK FOREST, IL 60466
IN 045 STURM, GARY L;1506 W HIVELY AVE;ELKHART, IN 46517
KS 020 RUSSELL, GARY W;1506 W 9TH APT 5;LAWRENCE, KS 66044
KY 021 DEESE, J.W.;977 TURKEY FOOT RD;LEXINGTON, KY 40502
KY 022 SULLIVAN, EARL;805 N CENTRAL AVE;CAMPBELLSVILLE, KY 42718
LA 019 GUIDRY, CLIFFORD J;308 W A SCHOOL ST;RAYNE, LA 70578
MA 080 BURRILL, KENDALL;64 PLEASANT ST;BRIDGEWATER, MA 02324
MA 081 BHEAUME, ROBERT E;8 TEMPLE ST;LAWRENCE, MA 01843
MA 082 BATUTIS, PAUL A SR;495 COTTAGE ST;ATHOL, MA 01331
MA 083 TAYLOR, WILLIAM F;252 AUSTIN ST;HYDE PARK, MA 02136
MA 084 FREEMAN, GERALD E;65 HIGHLAND ST;WARE, MA 01082
MI 068 FRANCE, MIKE;13456 COUWLIER;WARREN, MI 48089
MI 069 BLACKBURN, PAT;1435 BROADWAY;ANN ARBOR, MI 48105
MI 070 POWELL, RICHARD;PO BOX 312;ALLEN PARK, MI 48101
MI 071 LAWSON, DAVID C;7020 JENNINGS RD;LAKE CITY, MI 49651
MN 028 CIECMIEROWSKI, CRAIG;505 2ND ST SW;AUSTIN, MN 55912
MO 040 SHAFFER, DOC;526 N PATERSON;SPRINGFIELD, MO 65802
MO 041 BROWN, RICK;07 1/2 MAIN ST;TARKIO, MO 64491
MO 042 HUCKEBY, B.F.;19 CHARLOTTE DR;FLORISSANT, MO 63031
MO 043 LUCAS, JOHN H JR;1801 MAIN;KANSAS CITY, MO 64108
MO 044 BURGESS, CLIFFORD C;1406 OAK RIDGE DR;OAK GROVE, MO 64075
MS 015 LEE, CHARLES C;6451 NORTHWOOD PL;JACKSON, MS 39213
MS 016 JENKINS, W.D.;937 STEWART ST;JACKSON, MS 39204
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NC 026 LEWIS, ALTON P;PO BOX 184;MOUNT OLIVE, NC 28365
ND 004 ADAIR, BILL;363-7TH AVE S APT 3;FARGO, ND 58103
NJ 093 CARTER, RUSSELL;R.D. 2 BOXITICUS RD;MENDHAM, NJ 07945
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NJ 095 SARPOLUS, FRANK W;BETHANY MANOR APT 4G;500 BROAD ST
KEYPORT, NJ 07735

NJ 096 LEVIN, JEHUDA J;77 ENGLE ST;TENAFLY, NJ 07670
NJ 097 SNOWDEN, RONALD;11 GAFFNEY LANE;WILLINGBORO, NJ 08046
NJ 098 CAMUCCIO, KENNETH;533 SINGLEY AVE;RUNNEMEDE, NJ 08078
NJ 099 GAUNT, ROBERT F;73 HARMONY ROAD;MICKLETON, NJ 08056
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RIDGEWOOD, NJ 07450
NJ 101 SCHNEIDER, WILLIAM S II;BOX 99, PIERSONS LN
BUTTZVILLE, NJ 07829
NJ 102 HOLZMER, ALLYN;3858 BAYSHORE RD;NORTH CAPE MAY, NJ 08204
NJ 103 ROSSI, GREG;850 CHAMBERS ST;TRENTON, NJ 08611
NV 008 PINION RADIO SALES;6230 PERSIA RD;CARSON CITY, NV 89701
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NY 146 HALL, RICHARD T;266 BRINKMAN ST;BUFFALO, NY 14211
NY 147 SAMEL, A.;133 CORTELYOU AVE;STATEN ISLAND, NY 10312
NY 148 SPORMAN, HENRY W;PO BOX 131;HINSDALE, NY 14734
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NY 150 RICCIUTO, ALBERT;24 MARLOW ST;ROCHESTER, NY 14611
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OR 034 AVENT, STEVEN K;13531 CLAIRMONT WAY 754
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PA 115 SMITH, JAMES M;APT 309;6007 PENN CIRCLE SOUTH
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COMMUNICATIONS PROFILE

RCMA, P.O. Box 216, Willow Grove, PA 19090

This column is for special projects that explain various radio systems in detail. Frequencies and radio codes of not only municipal agencies and certain federal government agencies may be listed, but also large businesses and corporations. The contributions must be lengthy enough that publishing it in one of the regular columns would not be possible due to length. If you would like to submit a report such as the one below, please follow No. 8 in the inside front cover of the newsletter.

Because of its considerable length, an excellent article by David (MO-009) on the St. Louis, Missouri metro area ambulance dispatching system is being held until the May issue. Watch for his contribution next month!

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NOAA WEATHER RADIO STATIONS
(Continued from last month)

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CITY	ST	CALL SIGN	FREQ MHZ	POWER WATTS	ANTENNA LAT	ANTENNA LONG	ANTENNA HT AMSL	ANTENNA HT AGL	DATE COMM	CTL BY
WASHINGTON	DC	KHB-36	162.550	1000	3838	7726	910	510	8/67	WBC
LEWES	DE	WXJ-94	162.550	500	3847	7510	186	175	4/78	ILG
CLEWISTON	FL	WXM-58	162.400	300	0	0	0	0		PBI
DAYTONA BEACH	FL	KIH-26	162.400	1000	2912	8101	230	200	6/76	DAB
FORT MYERS	FL	WXK-83	162.475	1000	2638	8149	279	260	8/78	TPA
GAINSVILLE	FL	WXJ-60	162.475	1000	2943	8224	530	350	1/78	JAX
JACKSONVILLE	FL	KHB-39	162.550	500	3020	8133	234	174	8/67	JAX
KEY WEST	FL	WXJ-95	162.400	1000	2440	8132	254	250	6/76	EYW
MELBOURNE	FL	WXJ-70	162.550	1000	2805	8037	212	192	1/78	DAB
MIAMI	FL	KHB-34	162.550	1000	2542	8009	316	306	5/67	MIA
ORLANDO	FL	KIH-63	162.475	500	2833	8125	415	350	1/77	MCO
PANAMA CITY	FL	KGG-67	162.550	1000	3009	8543	207	200	9/73	PNS
PENSACOLA	FL	KEC-86	162.400	330	3027	8714	233	200	6/72	PNS
TALLAHASSEE	FL	KIH-24	162.400	1000	3026	8416	370	300	6/76	TLH
TAMPA	FL	KHB-32	162.550	1000	2750	8216	535	500	10/67	TBW
WEST PALM BEACH	FL	KEC-50	162.400	330	2643	8003	219	200	5/71	PBI
ATHENS	GA	WXK-56	162.400	600	3400	8319	1215	350	9/78	AHN
ATLANTA	GA	KEC-80	162.550	330	3347	8423	1523	473	8/71	ATL
AUGUSTA	GA	WXK-54	162.550	500	3316	8217	935	500	7/78	AGS
CHATSWORTH	GA	WXK-52	162.400	200	3445	8443	2866	150	8/78	ATL
COLUMBUS	GA	WXK-55	162.400	100	3228	8503	1820	500	7/78	CSG
MACON	GA	WXK-71	162.475	1000	3248	8332	770	352	8/79	MCN
PELHAM	GA	WXK-53	162.550	500	3108	8406	825	500	7/78	MCN
SAVANNAH	GA	KEC-85	162.400	330	3204	8107	252	267	7/72	SAV
WAYCROSS	GA	WXK-75	162.475	500	3113	8234	710	550	9/78	SAV
HILO	HI	KBA-99	162.550	1000	1931	15518	5588	70	6/75	PHNL
HONOLULU	HI	KBA-99	162.550	250	2131	15809	4075	50	8/65	PHNL
KOKEE	HI	KBA-99	162.400	90	2208	15940	3770	20	8/72	PHNL
MT. HALEAKALA	HI	KBA-99	162.400	330	2043	15616	9775	35	4/70	PHNL
WAIMANALO	HI	TRNSL	162.400	10	2119	15741	1600	10	3/78	PHNL
CEDAR RAPIDS	IA	WXL-61	162.475	1000	4155	9139	1130	302	9/79	DSM
DES MOINES	IA	WXL-57	162.550	1000	4140	9345	1321	356		DSM
DUBUQUE	IA	WXL-64	162.400	1000	4232	9037	1225	300	6/79	DBQ
FORT DODGE	IA		.000	0	0	0	0	0		
SIOUX CITY	IA	WXL-62	162.475	1000	4229	9616	1760	500	1/80	SUX
WATERLOO	IA	WXL-94	162.550	1000	4247	9223	1365	320	11/79	ALO
BOISE	ID	WXK-68	162.550	100	4345	11606	7225	35	7/78	BOI
LEWISTON	ID	WXK-98	162.550	100	4628	11701	2695	15	11/78	LWS
POCATELLO	ID	WXL-33	162.550	100	4330	11240	6615	10	11/78	PIH
TWIN FALLS	ID	WXL-35	162.400	100	4244	11425	4323	20	6/79	BOI
CHAMPAIGN	IL		.000	0	0	0	0	0		

NOAA WEATHER RADIO STATIONS

CITY	ST	CALL SIGN	FREQ MHZ	POWER WATTS	ANTENNA LAT	ANTENNA LONG	ANTENNA HT AMSL	ANTENNA HT AGL	DATE COMM	CTL BY
CHICAGO	IL	KWO-39	162.550	500	4153	8738	2057	1482	4/53	CHI
MARION	IL	WXM-49	162.475	1000	3746	8856	760	260	6/80	STL
MOLINE	IL	WXJ-73	162.550	1000	4131	9034	931	361	10/77	MLI
PEORIA	IL	WXJ-71	162.475	1000	4046	8927	1080	280	12/77	PIA
ROCKFORD	IL	WXJ-74	162.475	1000	4201	8919	1068	230	8/77	RFD
SPRINGFIELD	IL	WXJ-75	162.400	1000	3948	8936	800	210	8/77	SPI
EVANSVILLE	IN	KIG-76	162.550	1000	3802	8732	453	72	5/75	EVV
FT. WAYNE	IN	WXJ-58	162.550	1000	4107	8510	1000	215	7/77	FWA
INDIANAPOLIS	IN	KEC-74	162.550	1000	3946	8600	1405	550		IND
LAFAYETTE	IN	WXK-74	162.475	100	4046	8646	1045	350	9/78	IND
SOUTHBEND	IN	WXJ-57	162.400	1000	4137	8612	1125	250	6/77	SBN
TERRE HAUTE	IN	WXK-72	162.400	1000	3931	8708	896	250	12/78	IND
CHANUTE	KS	WXK-95	162.400	400	3741	9525	1668	500	1/80	ICT
COLBY	KS	WXK-96	162.475	600	3929	10055	3474	430	9/78	GLD
CONCORDIA	KS	WXK-94	162.550	1000	3928	9741	1753	175	9/78	CNK
DODGE CITY	KS	WXK-93	162.475	1000	3738	10021	2508	400	9/78	DDC
ELLSWORTH	KS	WXK-92	162.400	1000	3843	9815	1975	330	7/79	CNK
TOPEKA	KS	WXK-91	162.475	1000	3900	9603	1700	400	8/78	TOP
WICHITA	KS	KEC-59	162.550	1000	3745	9718	1680	340	4/70	ICT
ASHLAND	KY	KIH-39	162.550	1000	3828	8237	1170	360	5/76	HTS
BOWLING GREEN	KY	KIH-45	162.400	1000	3705	8638	1099	543	5/76	SDF
COVINGTON	KY	KIH-42	162.550	1000	3902	8430	1087	267	5/76	CVG
ELIZABETHTOWN	KY	TRNSL	162.400	10	3741	8551	1695	150	7/77	SDF
HAZARD	KY	KIH-40	162.475	1000	3712	8311	2555	530	5/76	SDF
LEXINGTON	KY	KIH-41	162.400	1000	3753	8420	1655	775	5/76	LEX
LOUISVILLE	KY	KIH-43	162.475	1000	3822	8550	1350	380	7/78	SDF
MAYFIELD	KY	KIH-46	162.475	1000	3642	8832	1100	570	5/76	SDF
PIKEVILLE	KY	TRNSL	162.400	10	3730	8231	0	0	12/77	SDF
SOMERSET	KY	KIH-44	162.550	1000	3710	8449	2448	918	5/76	SDF
ALEXANDRIA	LA	WXK-78	162.475	400	3138	9212	815	600	12/78	LCH
BATON ROUGE	LA	KHB-46	162.400	330	3037	9111	491	415	2/67	BTR
BURAS	LA	WXL-41	162.475	1000	2921	8931	245	240	12/78	MSY
LAFAYETTE	LA	WXK-80	162.550	300	3003	9200	520	500	12/78	LCH
LAKE CHARLES	LA	KHB-42	162.400	500	3019	9320	386	366	9/67	LCH
MONROE	LA	WXJ-96	162.550	500	3212	9204	626	550	2/78	SHV
MORGAN CITY	LA	KIH-23	162.475	1000	2941	9111	451	450	6/76	MSY
NEW ORLEANS	LA	KHB-43	162.550	1000	2957	9004	511	503	7/67	MSY
SHREVEPORT	LA	WXJ-97	162.400	1000	3237	9352	720	400	2/78	SHV
BOSTON	MA	KHB-35	162.475	200	4213	7107	640	40	10/67	BOS
HYANNIS	MA	KEC-73	162.550	330	4141	7021	470	320	9/71	BOS
WORCESTER	MA	WXL-93	162.550	200	4218	7154	1565	201	7/79	ORH
BALTIMORE	MD	KEC-83	162.400	1000	3920	7635	448	300	4/73	BAL
HAGERSTOWN	MD	WXM-42	162.475	1000	3939	7758	1855	415	3/80	BAL
SALISBURY	MD	KEC-92	162.475	1000	3818	7540	476	450	7/73	WBC
ELLSWORTH	ME	KEC-93	162.400	1000	4433	6831	687	150	10/75	PWM
PORTLAND	ME	KDO-95	162.550	500	4346	7019	735	315	11/70	PWM
ALPENA	MI	KIG-83	162.550	300	4504	8343	1068	158	6/76	APN
DETROIT	MI	KEC-63	162.550	330	4228	8315	1024	360	6/72	DTW
FLINT	MI	KIH-29	162.400	1000	4313	8343	1558	868	4/76	FNT
GRAND RAPIDS	MI	KIG-63	162.550	1000	4253	8536	924	120	2/75	GRR
HOUGHTON	MI	WXK-73	162.400	1000	4702	8842	1806	300	10/79	MQT
MARQUETTE	MI	KIG-66	162.550	300	4633	8723	820	110	1/75	MQT

From CHUCK GYSI (PA-005): The following excerpt is from a story by The Associated Press on the return of the former U.S. hostages to America.

"On CBS, after several attempts to establish voice contact between Walter Cronkite in the anchor booth and correspondent Phil Jones on the street below, Cronkite mused, 'We've heard from Weisbaden and Algiers, but we can't reach you 50 yards away...You should get on the plane and go to Weisbaden.'"

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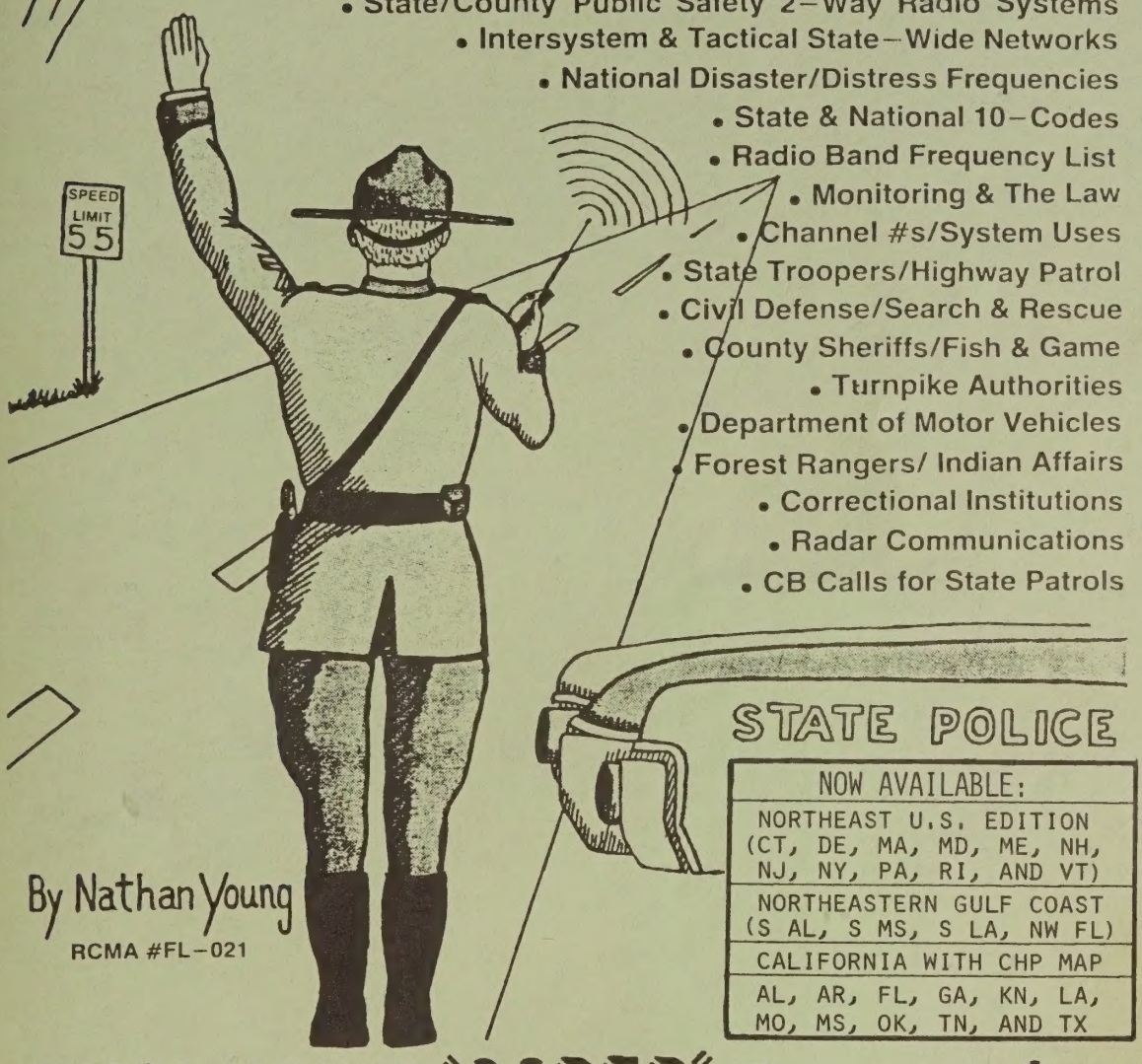

By Nathan Young
RCMA #FL-021

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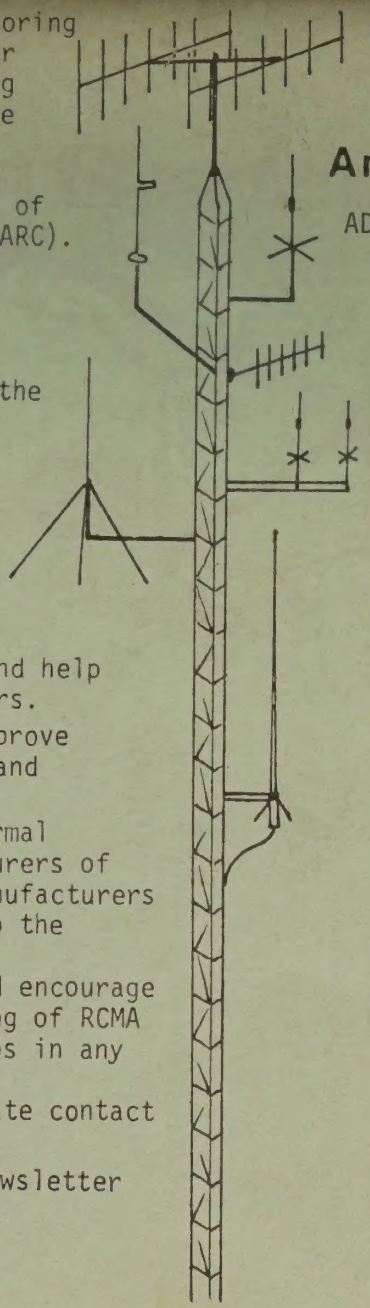
The Radio Communications Monitoring Association is a radio club for persons interested in listening to two-way communications above 30 MHz as a hobby. RCMA was founded in May 1975 and is a Full Member of the Association of North American Radio Clubs (ANARC).

The goals of RCMA are:

1) To provide a fraternity for those who seriously pursue the hobby of monitor radio listening.
2) To try to be knowledgeable about two-way radio systems and operations.
3) To promote an understanding of the legal and ethical uses of monitor receivers.
4) To share information with and help other monitor radio listeners.
5) To try to understand and improve receivers, antenna systems and related equipment.
6) To offer suggestions and formal recommendations to manufacturers of monitor receivers and to manufacturers of other products related to the hobby.
7) To offer suggestions for and encourage the organizing and conducting of RCMA meetings and tours for groups in any geographic area.
8) To encourage and to facilitate contact between members.
9) To publish a regular club newsletter devoted to the hobby.



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